AMERICAN AGRICULTURIST.

ADAPTED TO THE

Farm, Garden, and Household.

AGRICULTURE IS THE MOST HEALTHFUL, THE MOST USEFUL, AND THE MOST NOBLE EMPLOYMENT OF MAN—WASHINGTON.

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January.

Thou hold'st the sun
A prisoner in the yet undawning east,
Shortening his journey between morn and noon,
And hurrying him impatient of his stay
Down to the rosy west; but kingly still,
Compensating his loss with added hours
Of social converse and instructive ease,
And gathering, at short notice, in one group,
The family dispersed by daylight and its cares.
I crown thee king of intimate delights,
Fireside enjoyments, home born happiness,
And all the comforts that the lowly roof
Of undisturbed retirement, and the hours
Of long uninterrupted evening know.—COWPER.

No theme in our English poetry is more frequently, or more charmingly handled than the fireside. It is the good old English fireside—the blazing brands of the farmer's hearth that they sing. They lived before stoves were invented, or furnaces had usurped the place of fire in the farmer's home. The liveliest imagination would find it difficult to throw any poetic charms around these dark, dumb heaters. Our fathers brought over the wood fire with them, and found here abundant aliment to feed it for two centuries. Most of the generation now passing off the stage remember it, among the happy visions of their childhood—the ample fire-place, the large back-log and its rider, the andirons or fire-dogs, long enough to accommodate a small sled load of wood, the big fore stick, and the blazing, sputtering billets behind, the circle of happy faces around the hearth, the dancing shadows on the wall. All these images come back to us, pictures of delight, as we gather around the Winter fireside.

With multitudes it is only a relic of the past. The stove or furnace has closed up the fire-place, and the poetry of house-warming has gone. The fire has no longer a side to it, and we have no need to turn, first one side, and then the other to the blaze, to keep warm. The heat is made ubiquitous in every corner of the room, and the only circle formed in the Winter evening, is around the center table, where all the household gather for their social enjoyments. The open wood fire still exists, but it is only in new settlements, or obscure places, that cast iron has not yet invaded.

But all that was essential in the open fire place, is retained in its successor. The fire, though concealed, gives out its genial warmth, and becomes the rallying place for the household. What we have lost in the cheerful blaze, we have gained in lights. The tow wick candle, dim and smoky, has been succeeded by lamps of various pattern, fed by animal oils, coal oil, etc., diffusing a steady, brilliant light, turning the night into day, and making reading and domestic labor as pleasant as in the day-time.

The fireside is one of the happy accidents, that has molded the character of the Anglo Saxon race. The cheerless Winter has driven them into this retreat, and kept them under its influence for at least six months of the year. The love of home, the strong passion for land upon which to build a home, and the virtues of domestic life, which mark the race, are traceable to the fireside. The children are kept longer and more immediately under the influence of their parents, and domestic enjoyments become more a necessity and a study for both parents and children.

These bleak, cheerless days naturally turn our thoughts within, to home enjoyments and duties. There is a pleasure in the contrast between Summer and Winter, each giving increasing zest to the other. We have now cold instead of heat, a mantle of virgin white, instead of the universal green, and rest instead of activity. Following the hint of the season, how shall we make the most of this in-door life? It should not be wasted, and become a season of mental inactivity.

A great deal depends upon the surroundings of our domestic life, the place in which the family spends these Winter evenings. We are creatures of associaton and habit, and social and mental cultivation can not go on equally well in all places. Too many farmers live in the kitchen, so that the associations of their daily toil are never, for a moment, removed from their waking hours. If man were a brute, and had no other office in life than muscular labor, this arrangement would be good enough. But he has a spiritual nature, and other aims in life than the daily industries by which he gains his bread, and it is meet that he should have time and place for the cultivation of his mind and heart.

Nothing but the stern necessities of poverty should force the farmer and his family to live in the same room where the cooking and domestic drudgery of the household are done. There should be a living room, away from the steam of ovens and the sights of pots and kettles, consecrated to rest, to social enjoyment and mental cultivation. Let it be fitted up in the most comfortable and tasteful style that the farmer's means admit of. Let it be painted and papered, and carpeted, and furnished with a mirror and bookcase, and especially let it be well warmed and lighted. It should be made so cosy and attractive, that the boys shall have no temptation to spend their evenings abroad.

The ruin of many a youth begins in the want of such a room in the farmer's home, or in the fact that it is never used. He is too parsimonious to afford fire and lights for his children, and they early form the habit of spending their evenings at the neighboring village, in the grog shop, or some place of vicious resort. Our children have social natures, and if we do not provide entertainment for them at home, they will seek it abroad. The expenses of such a living room need not be large after it is once fitted up. But were it ten times what is necessary, it would be far more economical than vicious habits in children.

Here, in this cheerful well furnished apartment, let parents and children gather for social enjoyment and cultivation. What can be more delightful than this family gathering, when the toils of the day are over? Here is one spot consecrated to rest, where the cares of the world do not invade his peace. Here the wife and mother reigns supreme, diffusing her own neatness, cheerfulness, and joy, through the family group. Here the farmer puts off his cowhide boots and working garb, and forgets the labors of the field in the tender assiduities of the husband and the father. Here he enjoys his manhood and citizenship as he reads the news of the day, or studies the science of his calling.

It is the privilege of every farmer to make his home the center of attraction to his household, a nursery not only of the bodies of his children, but of all those graces and virtues that adorn our humanity. It becomes us to remember, as we reach another landmark in our pilgrimage, the NEW YEAR, that the farm exists for the sake of the family, that manhood and womanhood are its noblest products, the true aim of all its industries. We do not fulfill the end of our existence in making the soil better, and in stocking it with a better race of animals; we want to make our own race better, to bring in a higher style of manhood, with a fuller social development, and a more generous mental culture upon the farm. Make the fireside what it ought to be, and we shall suffer no loss in the departure of the genial skies of Summer. We can welcome the chill breezes of Winter, its howling storms, its biting frosts, if it make our hearts warmer, our heads wiser, and fit us the better to discharge the duties of life.

We double all the cares of life by pondering over them. We increase our troubles by grieving over them. A scratch becomes a wound, a slight an injury, a jest an insult, a small peril a great danger, and a slight sickness often ends in death, by the brooding fears of the invalid.

Calendar of Operations for January, 1860.

[We note down sundry kinds of work to be done during the month, not so much to afford instruction to practical men, as to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 38° to 45°; but will be equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the South, later for the North.

This table will be much fuller, and more important during the planting season when there is a greater variety of work to be done.

EXPLANATIONS.—*f* indicates the *first*; *m* the *middle*; and *l* the *last* of the month.—Doubling the letters thus: *ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signifies that the work may be done in either or in both periods indicated; thus, work marked *fm* indicates that it is to be attended to from the *first* to the *middle* of the month.]

Farm.

This is the season for the thought crop. The seed may be obtained from the past year's experience of yourself and others, and books and papers will furnish a still wider choice. New thoughts are both capital and tools. *Thinking* men *command* success. Let the home department receive due attention. Settle outstanding accounts and, as far as practicable, start square with the year. Improve the farm on paper. Lay drains and build walls with pen and *ink*, plant fields with pencil and ruler. Get the whole farm and its future operations *by heart*, and thus be ready for the coming campaign. Then enlarge good farming into good "neighboring." Start the farmers' club, urge forward neighborhood improvements, better roads, superior school-houses, and whatever the public need. These labors will fill the leisure of Winter pleasurably and with profit. For other operations the calendar of last month needs but few additions.

Barns and stables are, or should be in part, factories for working up Summer produce into stock for the market and manure for the farm. Make the most of the raw material. Suffer no waste. Cut coarse fodder and mix with meal, shorts, etc. Save liquid manure by using muck, sawdust or other absorbents. See subsequent articles.

Breeding Animals—Keep thriving, but do not overfeed. Good shelter is humane and profitable.

Cattle if half starved will eat almost anything, but pay for nothing. Feed *regularly*, giving roots with dry food. Give water at least three times a day. Keep them warm, provide plenty of bedding. Use the card frequently. Break steers. Handle heifers to prepare them for milking.

Cellars—Watch against frost. Cover exposed bins of roots or apples with straw. Shut the cat in at night—rats will be frightened away if not caught.

Corn—Shell for market. First, select the best for seed, if neglected until now. Grind and cook that fed to swine.

Farmers' Clubs should be established in every school district. Invite your neighbors to join. Two heads are better than one, and all the heads in a neighborhood set to thinking, will bring out much of value.

Fencing Stuff—Cut and prepare while the weather favors. Make gates, and hole or pin posts under cover, stormy days.

Grain—Secure from dampness; expel rats and mice.

Hemlock and Oak Bark—Market early that prepared for the tannery.

Hemp and Flax—Break and prepare for market.

Hogs—Keep them in comfortable pens. Supply with leaves, straw, dry muck, sawdust, etc., for bedding and manure. Clean out the pens often. Give cooked food, and an occasional treat of barn sweepings, cut hay, etc., for a change. Turn in the male for Spring pigs, ff, if not already done.

Horses—Treat them as they deserve, with warm, light stables, plenty of bedding, and a liberal allowance of grain. Give carrots frequently. Keep well shod and sharpened, and blanketed when standing out. Handle and halter-break colts.

Ice Houses—Build above ground convenient to the dwelling, if not provided. Secure a full supply of ice. Provide for drainage and ventilation.

Implements—Repair broken and look for new. Examine advertisements and catalogues of dealers. Keep wood-work painted, and coat iron with tallow and resin to protect from rust. Oil running gear of horse powers, fanning mills, etc.

Lumber—Cut surplus forest growth for boards, posts, ties, cabinet work, etc., if it can not be done in September, which is preferable. Take out old trees and give the young growth a chance.

Manure—Make it from every source; stable, pen, privy, muck-bed, and kitchen-drain. In each of these are the elements of grain, grass, fat cattle and swine, full pockets, and prosperity.

Marketing produce is conveniently done at this season. Keep an eye on market reports. Sell when a paying price is offered. Be careful to have a full understanding in making contracts, and do a cash business as far as practicable.

Plowing when the ground admits, benefits heavy soils; the frost will crumble them. Insects and noxious weeds will also be destroyed.

Poultry will pay in marketable currency for warm quarters, and good care. Feed with cooked grain, potatoes, and refuse meat, until they sing. Allow free access to water. Provide them with gravel, also pounded oyster shells or lime, and ashes to wallow in.

Roads—Allow none to remain obstructed by snow drifts. Keep sluice ways and bridges in order.

Salt all stock at least once a week. A little on cut feed will give a relish, benefiting cattle and saving fodder.

Sheep—Turn the buck with the ewes, ff. See article on page 12. Keep separate from other stock, allowing warm sheds for shelter. Give a few roots daily, and an allowance of grain to breeding ewes.

Wood should be secured, cut, and seasoned under shelter. Cut decaying and fallen trees. Provide a year's supply in advance.

Orchard and Nursery.

Trees are now taking their Winter rest, and need but little attention except to preserve them from injury by cattle browsing the tender shoots, or rubbing and barking the trunks. In Southern latitudes, grounds may be prepared and trees planted out. Where immediate effect is desired, large trees may be removed in Winter by digging them up with a large mass of frozen earth attached, and resetting in holes previously prepared: but a good, permanent growth can not thus be secured. In a short time such trees lose vitality. It is better to transplant younger trees and wait a few years.

Keep all standing water from the grounds by surface drains now, and by thorough underdraining as soon as the season will allow.

Pruning at this season is not advisable. The wounds are liable to crack from hard frosts. In mild latitudes it may answer, but late Summer is better.

Examine trunks and branches for caterpillar and other eggs, and clear off rough bark and scale. Protect against rabbits by tying thick tarred paper around the trunk. Heap up a mound of snow and trample it firm about the tree to keep off mice, especially near walls and hedges.

Cions may be cut at any time when free from frost, and buried in sand in the cellar for Spring use.

Provide a full supply of implements, stakes, labels, tallies, etc., for another season.

Kitchen and Fruit Garden.

The work in this department will be mostly on paper this month, where new beds may be laid out and other improvements marked. Catalogues and other sources may be consulted for new varieties of seeds. In latitudes permitting it, ground may receive preparation for early vegetables.

Bean, Hop, and Grape vine poles, pea brush, etc., may now be secured while cutting the supply of fuel.

Cold Frames—Ventilate when weather permits, and protect from severe cold with extra covering. A snow blanket will do them no harm.

Cuttings of currants and gooseberries may still be made and the bushes pruned.

Hot-Bed Frames and Sashes—Prepare all for early use. Extra early vegetables may be sown in them, ll, but February is better for ordinary purposes.

Mushrooms—Prepare boxes and keep from frost, and moderately moist, in the cellar or green-house

Raspberries—Examine those covered last month, and replace the earth if washed away.

Rhubarb for earliest use will be much forwarded by covering with an open half barrel, filled with manure.

Seeds—Test before buying a full supply. Examine those stored, and guard against mice.

Trench or plow where needed to lighten clayey spots, when weather permits.

Flower Garden and Lawn.

Protect evergreens and other shrubbery from being broken by snow, or ice. A slight jarring after a storm will usually be sufficient. With the juniper and yew it is a good precaution to pass strong twine around spirally to keep them compact.

In Southern States, and wherever the ground can be worked, walks may be graded and hardy shrubs and deciduous trees planted. New walks and other improvements may be planned for.

Prepare labels and stakes for Spring use, tying them in neat packages to facilitate the operations of a busy season. Examine the flower pits and frames, and admit air every mild day, but keep closely covered during heavy frosts. If covered with snow, leave it on for a Winter protection.

At the South where there is little frost, trees and shrubs may be planted, layers and cuttings put in, grounds laid out and dug, or trenched, and hardy annuals and perennials sown.

Green-Houses.

The object of this department being preservation rather than growth, care will be necessary in regulating the temperature. If made too warm, the plants will be forced too rapidly, and as colder weather alternates with mild, will be subject to injury, without great pains. The heat may range from 35° to 45°. It should be sufficient to dry the air.

This apartment should be kept scrupulously neat. Remove decayed leaves, stalks, etc., from the pots, and stir the earth in them frequently. Sweep and dust the floors, and syringe the plants occasionally.

Air should be admitted through the upper ventilators, but not in foggy or damp weather. When very cold the houses must be kept closed and covered with shutters or mats, removing them and ventilating on mild clear days.

As the plants tend to grow toward the light, the pots should be turned occasionally.

Bulbs—Water moderately, except for a rapid growth, and remove to the parlor or forcing house those wanted for blooming.

Insects—Check with tobacco smoke and soap-suds.

Oranges, Lemons, Oleanders and Myrtles beginning to grow, will need moderate waterings, and more light. Examine the trunks for scale or other insects.

Water moderately most of the plants in this collection. They require very little while in a state of rest. As they push into growth increase the quantity and give more frequently. Tepid water may be used to advantage, and it is better to apply it during the middle of the day.

Hot-Houses and Conservatories.

Sudden changes are most severely felt by rapidly growing plants, and great watchfulness will now be required to maintain steady heat. From 70° to 80° is most favorable, varying according to the nature of the plants, and the rapidity of forcing. Too high temperature at night is injurious, as plants are naturally accustomed to a decline of a few degrees during darkness.

Air is in good part the life of plants, and should be frequently renewed for their use. Admit it through the upper ventilators to avoid a cool draft, during the middle of the day and in clear weather.

Azalias—Syringe and water more freely as they increase in growth and begin to bloom.

Bulbs—Bring from the green-house as wanted for succession of bloom. Change the water of those in glasses at least weekly.

Calceolarias—Repot those needing it, and turn frequently to secure upright growth.

Camellias should now show a fine bloom. Water once or twice a week and syringe the foliage. Avoid wetting the flowers as this will hasten their decay.

Carnations—Stake those in bloom, and water often. Shift those which are pot-bound. Put in cuttings for a Summer stock to bloom in the open grounds.

Cinerarias will need especial watching as they are favorites of the green fly. Tobacco fumes are the best antidote. Repotting will be necessary in many instances.

Cuttings and Layers of many growing plants may now be made to advantage, especially of those kinds intended for bedding out in the Spring.

Fuchsias—Select young vigorous plants, and prune to a good head. Those decayed and unsightly, may be worked up for cuttings. Repot growing plants.

Grapes, in the early houses are beginning to color, or even ripening off. They require a dryer atmosphere with very little water at the root. Air freely. Later houses require more care. Some need pruning, thinning, syringing, and an application of sulphur to destroy the mildew according to the amount of forcing they have received.

Insects—Prevention is better than cure. A moist atmosphere, frequent washing and syringing of the foliage, hand picking, etc., are the best preventives. For a cure, use tobacco fumes for thrips and green-fly, soap and water for scale, and a sponge or syringe and clear water for red spider.

Peach Trees, Nectarines, Figs, etc., in pots, should now be placed in a warm part of the house, repotting if necessary. With proper care, watering occasionally with liquid manure, they will fruit during the latter part of June.

Petunias, Verbenas, Pelargoniums, etc.—Plant cuttings and layer for an increase of stock. A large number will be wanted for massing in the Spring.

Pines—These begin to show fruit. A high temperature is needed, say, 80° to 85°. Water each week.

Potting—Many plants need an early shift to pots of a larger size, and cuttings inserted last month are now ready to pot off. Have a heap of potting soil at all times in readiness where it will not freeze.

Seeds of many out-door annuals may now be sown for early planting in the borders as soon as made up in the Spring.

Shutters—Have in readiness and use during snow storms and when very cold or windy. It is not best to leave them off at night unless the weather is quite mild.

Water—Examine the pots and apply water when the soil becomes partially dry. Syringe frequently, but avoid excess. More water will always be needed as rapidity of growth increases. The water should always be soft, and taken from a tank or cistern in the house itself.

Apiary in January.

Plenty of air is as necessary for bees in Winter as in Summer. Without care the passages may be closed by rain freezing on the outside, or moisture condensing from the inside, and the bees be smothered. Dead bees and filth falling from the combs sometimes obstruct the entrance. Turn back the hive occasionally, and clear away all litter and frost. It is not necessary to dig out hives that may be covered by drifting snow....During mild weather, unless there be new fallen snow on the ground, it is well to allow the bees to fly; but on days only warm enough to tempt a few to issue, shade the hive to discourage them. In very cold weather the heat of the sun is needed upon them....Continue to guard against depredations from rats and mice, especially with those stored in the house. These latter, should be kept dark and as quiet as possible. The offensive effluvia from dead bees may be removed by sprinkling air-slaked lime upon the floor of the room.

Descriptive Notes upon the Seeds Distributed to our Subscribers.

Explanation.—For list of Seeds, see page 26. The following notes are designed not only to describe the seeds, but also to indicate the mode of culture. This list should be preserved. Other fuller articles on various plants will appear from time to time, and also hints as to the time of planting, etc., in the monthly Calendar of Operations. The missing numbers in our seed list are those of seeds dropped, in some instances because supposed to be sufficiently disseminated, and in others because having been generally tried, they have not proved worthy of further introduction. A portion of the seeds offered this year, are quite common in some parts of the country, but we offer them for the benefit of those who have not yet had them, and especially for numerous subscribers who live in the Western States and Territories remote from convenient access to seeds of any kind. Our packages are necessarily small; in some cases they are put up with reference to the little weight that can go under postage stamps, and in others, because of the great cost of choice seeds. Very many of our flower seeds for example, cost us four, five, and six dollars the pound, and several of them much more than this, even when bought at the lowest wholesale prices in Europe, and imported by us duty free. Most of these seeds are annuals, and the product of the first year will furnish an abundant yield of seed for the future. Generally, the small packages of flower seeds will supply all the plants required in an ordinary flower bed or garden, if sown and cultivated with moderate care.

Field Seeds.

No. 2. Improved King Philip Corn.—Described particularly last month. A heavy brown corn, maturing early; larger than the older King Philip, but not quite so early. Specially adapted to short seasons, or late planting.

No. 3 Stowell's Sweet Corn.—A large growing variety, long in maturing, and hence called "Evergreen." Difficult to obtain ripened or pure seeds; much of it being nipped by frost; and a large portion of that in the country being impure, from hybridization. Valuable for size both of ear and stalk, and from the length of time it may be gathered for cooking.

No. 6. Ashcroft's Swedish Turnip.

No. 7. River's Swedish Stubble Turnip.

No. 70. Waite's London Purple-top Swedish Turnip.

These are improved varieties of the ruta-baga, yielding well and of good quality; and maturing early, and hence may be sown late, say in June or even in July.

No. 94. Crystal Flint, or Hominy Corn.—Described in an article last month. A beautiful, large growing, productive corn. Kernel white, or almost transparent flint, beautiful for meal or hominy. Requires the ordinary corn season, and plenty of room.

No. 98. Long Red Mangel Wurzel.—A good beet for feeding and fair only, for cooking. Requires early planting, and the same culture as ordinary beets, but needs more room, as they grow to a large size.

No. 101. Improved Long Orange Carrot.—This is an improved variety of the well known Orange Carrot, cultivated by the Society of Friends at Pawtucket, R. I., it requires the usual culture of common carrots.

Vegetable or Garden Seeds.

No. 8. Daniel O'Rourke Pea.—See page 18.

No. 9. Champion of England Pea.—See page 18.

No. 11. Kohl Rabi—"A turnip out of ground;" resembles a round turnip growing on a short cabbage stalk, with a dozen or so of long-stemmed cabbage leaves growing from different parts of the bulb. Cooked when green, the same as turnips, it is tender, sweet and better than a turnip or cabbage. If left to mature it becomes hard and tough. Cultivated the same as cabbages. It matures earlier, however, and when not for early use may be sown in the open ground in May. Sow at several intervals for successive use during the Summer. We have never known it to fail of growing good heads or bulbs, and recommend its general culture. Cook when the bulbs are not larger than tea cups if you would have it in its best state. Those who have left it to harden before cooking, do not know its value.

No. 13. Enfield Market Cabbage.—A small quick growing very fine early cabbage. With us no early cabbage has equaled this. It was first introduced from England by us three years since.

No. 15. Mammoth Cabbage Lettuce.—Its character is sufficiently indicated by its name. One of the best varieties we have known.

No. 17. Red Strap Leaf Turnip.—The most rapid growing turnip we have, and of very fair quality. Matures early for Spring and Summer use; and may be planted later than any other, and yet mature.

No. 21. Winter Cherry (*Physalis viscosa*).—Sow in open ground at any time, the earlier the better, though the seeds may not come until May or June. For early use a few of the seeds may be started like cabbage seed, in a green-house, or hot-bed, or in boxes, or bits of turf. It bears transplanting well. The fruit matures early, and when lemon is added to give it a little tartness, is excellent for sauce, and pies. Is a substitute for fruit in newer countries. The green fruit makes good pickles. The ripened fruit keeps all Winter—hence its name. Fruit about the size of cherries; drops off when ripe. Plants grow spreading, and two to four feet high; requires 2 to 3 feet square for each plant. We have plenty of seed of our own raising.—*Physalis alkekengi* is another variety bearing a larger and more acid fruit, and would be far preferable, but it does not mature in this latitude, unless started early in the green-house, and not always then. Of this variety we have a little seed for Southern subscribers specially desiring it.

No. 55. White Globe Onion.—A new variety introduced by us two years since. Large, white, globular, good flavored. We had many good reports from it during the past year.

No. 57. Eugenie Pea.—See article on page 18.

No. 58. Napoleon Pea.—See page 18.

No. 63. London Particular Long Scarlet Radish.

No. 64. Extra Red Round Turnip Radish.

Both of these were introduced by us two years ago and they have given very good satisfaction. They were the best of several kinds tried last season. Sow early in Spring, and at intervals for a succession. They mature quickly.

No. 71. Long White French Turnip.—A large, white, sweet turnip, good for garden culture for table use, or for field culture for feeding. We know of no turnip equal to it for the table, and for long keeping. In two or three localities it did not do well the past season, owing to the weather, or soil, or manure, but the general reports are decidedly in its favor. May be sown for table use at any time up to June; and for a general crop and Winter keeping from the middle of June to middle of July or later.

No. 72. Brussels Sprouts (Imported).—This belongs to the cabbage tribe, and is cultivated similarly. It bears on each stalk a number of little cabbage-heads, hardly the size of a hen's egg. These are cooked like cabbage, and are considered a delicate, excellent vegetable.

No. 74. Solid White Celery.—This is the best variety cultivated here. For Summer use sow in the hot-bed in Winter; and in the open ground in Spring, for Fall and Winter use. A special chapter on its culture will be needed by the inexperienced.

No. 76. Skillman's Nutted Muskmelon.

No. 77. Mountain Sweet Watermelon.

These are the most popular varieties for family use. We have tried others the past year, but found none excelling them. The seed is now pretty well diffused, and is only offered to meet the wants of those unable to get it of dealers. Plant when danger of frost is passed, or before by using boxes of earth, or sods, as will be referred to in due time.

95. Hubbard Squash.—This was illustrated and described in last volume, page 83. It is a good squash for Winter and Spring use, and may be cooked also as a late Summer squash. We did not succeed in getting a very good yield, or large specimens, but several neighbors had good success and like it very well. We shall plant again, and offer the seed to those desiring it.

No. 99. Prince Albert Pea.—We have not tried this, but several subscribers who have done so recommend it very highly, and we place it in our general list. Grows 2½ to 4 feet high, according to soil, and matures very early.

No. 100, Early Cape Broccoli.—A variety of cabbage somewhat resembling cauliflower, though less delicate. Sow early in May, on rich ground in the open garden. Cover lightly, and water a few times if dry, until the plants appear. Transplant in July in rows two feet apart, twenty inches in the row, and cultivate like cabbage. Cut the heads before they open.

No. 102.—Mammoth Leghorn Squash.—This was described at length in Vol. 18, p. 327. It was recently introduced from Leghorn, Italy, is very large and of fine quality for the table. We saw a number of specimens growing last Summer which weighed from 75 lbs. to 100 lbs. each. This was of course on good soil. We secured all the seed from 4,500 lbs. of the squashes, but although large in size they contain but a small number of seeds. We have scarcely ten pounds in all. As there are many applicants it will not be possible to send more than 3 or 4 seeds to each and probably very many asking for them can not be supplied at all this season.

No. 103. Sage is too well known to require description. The seed is distributed for supplying subscribers in newly settled districts where even common seeds are sometimes obtained with difficulty.

No. 104. Thyme.—A common aromatic herb sent like Nos. 103 and 105, for convenience of remote subscribers.

No. 105. Chili Red Pepper.—For seasoning, pickles, etc. Sow thinly, half an inch deep in a pan in the house, or a hot-bed in March or April, and transplant in May or June, a foot a part, in rows eighteen inches distant. Transplant when three or four inches high, hoe frequently, and earth up the stems.

No. 106. Sweet Marjoram.—A popular pot-herb, sow early in April, cover very lightly in rows ten inches apart, and when up, thin to too inches in the row. Cut the plants when first blooming and dry them in the shade.

No. 107. Giant Asparagus.—This has been brought to superior size by continued good culture. Sow early in Spring, in drills one and-a-half inches deep, and eighteen inches apart, on well manured ground. Keep free from weeds during the Summer. In October cover the bed with litter to protect the roots from frost. The roots may be transplanted when one year old, into beds prepared by deep trenching and heavy manuring. Further directions for its culture given from time to time.

No. 108.—Mammoth Pumpkin.—We have not cultivated this variety, but obtained the seed from a reliable source, where it was pronounced superior.

No. 109.—Mammoth Red Tomato.—Recommended to us as of large size if well grown, and of excellent quality.

Flower, Fruit, and Ornamental Seeds.

No. 23—Mignonette (*Reseda odorata*). A fragrant annual, with moderate claims to beauty of flower, but a favorite for its perfume. Of easy culture; grows on almost any soil; blooms profusely until killed by frost; sow May 1st, to June 15th.

No. 25—Nasturtiums (*Tropæolum majus*). A semi-creeping annual, often trained on a trellis or allowed to run over rocks or walls. Bears a profusion of flowers. The mixed seed we distribute giving yellow and crimson colors; is doubly valuable, as it yields beautiful flowers, and its seed capsules picked green make an excellent spicy pickle.

No. 27—Cockscomb (*Celosia cristata*). A pretty well known plant, named from its corymb or head which in some varieties resembles a cock's comb. This is made up of an infinite number of minute scarlet flowers. We have seed of a variety which produces a cone-shaped head, of a splendid deep crimson color. (The seed cost us $24 per lb.) It is often grown in pots, but florishes well in the open ground; continues long in bloom; sow in Spring; grows 2 to 3½ feet high.

No. 29—Double Balsams (*Impatiens balsamina*). Called also "Garden Ladies' Slipper", in distinction from the wild Ladies' Slipper. They are sometimes called "Touch-me-not", as the seed capsules, or pods suddenly burst when touched. We send out several varieties of seeds mixed, to give a diversity of color in the flowers, which range from pure white, lilac, pink, rose, and a blending of these colors. The double flowers are very pretty, but it is difficult to preserve them double, as they are prone to return to their natural single state. The balsams are annuals; grow 1½ to 2 feet high; branching

when not too thickly planted; easily grown on every variety of soil; usually sow themselves, but seed of double flowers should be cultivated for propagation.

No. 30—TASSEL FLOWER (*Cacalia coccinea*). This is most appropriately named, as the flower is a perfect "tassel" with scarlet fringe. We have admired it as much as any flower grown in our garden. It has been called "Venus' Paint Brush". Sow in the Spring; it usually blooms from July until killed by frost; hight, 1 to 1½ feet.

No. 31—CHINESE PINK (*Dianthus Chinensis*). Dianthus signifies "Flower of God", and embraces the Sweet William, Carnation and garden or common PINK. They are mostly perennial, or biennial like the Chinese variety. This is a pretty flower, though without the fragrance of several of the species. Though biennial it blooms somewhat the first year. The flowers range from the richly colored crimson, with edgings of pink, lilac, and other shades, to pure white with a center of dark red, nearly approaching a black color; even in the largest collections it is almost impossible to find two flowers alike. They continue to bloom for several months in succession. Sow in Spring.

No. 32—SPLENDID PORTULACA, MIXED (*Portulaca splendens, lutea, alba, elegans, etc.*) A bed of either of the above, or of the whole combined makes a fine show. We send out mixed seeds. The portulaca is a trailing plant of only a few inches in hight. On rich soil a single plant will cover a circle of one foot in diameter. They are usually grown too thickly. Colors white, red, yellow, scarlet and crimson, sometimes blended in the same flower. They are very hardy annuals blooming the entire season and leaving ample seed in the ground for a crop the next year. Sow in Spring, or even in Autumn.

No. 33—CYPRESS VINE (*Quamoclit vulgaris*). This is the finest hardy annual climber of the flower garden. There are two colors, white and scarlet, the latter being much the prettier. Sow when the ground is warm and dry, previously soaking the Seed for twenty-four hours, or it will vegetate shyly. See description and illustration of a cheep, pretty Cypress Vine *trellis* on page 339, Vol. XVII.

Nos. 34 and 35—CHINESE AND GERMAN ASTERS (*Aster Chinensis*), are so near alike that one description will suffice for both. Skillful German florists have simply improved the Chinese varieties. Some of them are very double or fully quilled, and rank among the prettiest flowers of the garden. Sown in the early Spring, they come into bloom in August and September, and continue until severe frost. They are among the latest flowers of the garden. Color white, red, yellow, and intervening shades.

No. 38—SWEET WILLIAM (*Dianthus barbatus*), belongs to the same family as Chinese Pink. It is one of the choicest perennials blooming the second year from seed, and so on through a long series of years. The great variety of colors, often combined in the same cluster, the delightful fragrance and richness of its bloom render the Sweet William a universal favorite which no garden should fail to have.

No. 40—ESCHOLTZIA (*Californica*) or California Poppy. A hardy and very showy annual from California and Oregon. It is trailing in habit, seldom growing more than a foot in hight. The flowers are bright yellow, and continue in bloom for a long time. A bed of them in full bloom almost dazzles the eye with their brillancy. (See illustration and description in Vol. XVII., p. 339.)

No. 42—FOXGLOVE, (*Digitalis alba, purpurea, lanata, etc*). A perennial of marked beauty. Some of the species are little more than biennials, dying out every few years. It grows from two to four feet in hight, and produces tubular flowers along its spire-like spike. Many of the flowers are finely mottled in appearance, and vary in color from pure white to lilac, pink, red and yellow. It is in bloom most of the season, and may be propagated from seed or divisions of the root. It yields the medicine *digitalis*. The seed we send out will be a mixture, of the finest varieties.

No. 47—MORNING GLORY (*Convolvulus major and minor*). An annual climber too well known to require much description. They florish in almost any position, and when allowed full freedom, extend along a fence or up a trellis eight to ten or more feet. They open very early in the morning—whence the name—and close when the hot sun comes out. They are white, blue, purple, and various intermediate tints. Sow at any time in Spring and Fall. Where once raised there is little danger of losing the seed. We send out two varieties of seed mixed, the *C. major* and the *C. minor*. The *minor* grows more dwarfish and branching, spreading out over a bed. It bears blue and yellow flowers, which continue in bloom later in the day than the major.

No. 49.—CANDY-TUFT (*Iberis umbellata, amara, etc.*) A good plant for sowing in masses. It is dwarfish, with flowers of various shades from pure white to purple. It may be sown in Spring or Autumn. It seeds itself in Autumn, and blooms the next season, six inches to one foot from the ground, in small clusters

No. 50.—SCHIZANTHUS (*humilis, pinnatus, etc.*). A pretty class of plants, blooming from August to October. The colors vary through several shades in which yellow and purple predominate. They grow about two feet high, and are annuals well suited to garden or pot culture. Sow in Spring.

No. 51—DRUMMOND'S PHLOX (*Phlox Drummondii*). This is one of the Phlox family, worthy a place in every collection of flowers. It is very hardy and finely adapted for massing. Flowers of white, pink, scarlet, crimson, and purple with the intermediate tints. A showy spreading plant of near one foot high. Sow in Spring.

No. 78—AGERATUM MEXICANUM, or blue-flowered Ageratum. A rather tender annual of Mexican origin, but flourishes well on a warm border, when sown about the middle of May. Some varieties are of a very pale blue, nearly approaching to white. They may be taken up before frosts, and transferred to the house in pots, where they form fine Winter blooming plants.

No. 80—YELLOW HAWKWEED (*Hieracium mutabilis*). This was introduced into our garden last season for the first time, and gave much satisfaction. A description hereafter.

No. 81—CANARY BIRD FLOWER (*Tropæolum peregrinum.*) This is an annual of the same family as the Nasturtium; a fine climber, with pretty little canary colored blossoms, which, when opening, have a fancied resemblance to a bird. Sow on light soil about the middle of May. It requires a trellis to run upon. (Seed scarce and very costly—may soon run out. Those sending for this should name a substitute to be sent in case we have no more seed.)

No. 82—THUNBERGIA (*alata, alba, aurantiaca, etc.*) This fine climber was illustrated on Page 339 of Volume XVII.

No. 83—SNAP DRAGON (*Antirrhinum majus*).—A curious flower, which when pressed, somewhat resembles an animals mouth. Sow in Spring.

No. 84—AFRICAN MARIGOLD (*Tagetes erecta*). A showy annual, with flowers of large size, and rich colors of orange, yellow, and purple. Sow any time in May, and they will flower in profusion from July until frost.

No. 85— GAILLARDIA (*picta* and *bicolor*). Often called "Painted Gaillardia." It is usually classed as a perennial, but, when sown early, say May first, on a warm soil, flowers the first season. It will not bear the Winter without some protection. Flowers large, crimson and yellow, borne on stalks one to two feet in hight, and of a showy appearance.

No. 86.—MIXED EUPHORBIA (*Euphorbia variegata*). An elegant flower from Missouri, blooming late in the season. Sow the latter part of April or early in May, on a warm soil. It is an annual. Some of the species are tender Green-house plants.

No. 87.—GOLDEN COREOPSIS (*Coreopsis tinctoria, atropurpurea, etc.*) A well known hardy annual with genuine claims to beauty. The *tinctoria* is the most common, with its bright yellow flowers having a dark center. It blooms profusely in June and July, and stands one and a half to three feet in hight.

No. 89—COTTON PLANT (*Gossypium herbaceum, arboreum, barbadense, etc.*) The common varieties of the South are *arboreum* or Sea Island, known as "Long staple;" *herbaceum* or "Short staple," called in commerce Upland cotton; and *barbadense*, or Mexican. The seeds we send out are Sea Island (*arboreum*), and Upland (*herbaceum*), mixed. The Seed of the Upland variety is covered with down; the Sea Island is smooth and glossy. They are easely separated and we therefore mix the two. This plant flowers in warm locations at the north, and is quite ornamental. Sow as soon as frosts are over and ground warm.

No. 90—NORWAY SPRUCE (*Abies excelsa*). Seeds of this and the following variety are only kept by a few extensive seedsmen; consequently they are difficult for people in the country to obtain. Every one admires this stately and very pretty evergreen tree growing from one hundred to one hundred and fifty feet in hight. Sow the first of May, on moist but well drained sandy loam, or still better in boxes, covering slightly and partially shading. Water occasionally, but if too wet they will damp off. There is little danger after two years old, when they may be transplanted to the garden or nursery. It is much better to get the young trees wherever they are accessible at the nurseries, as they usually are, and quite cheaply.

No. 91.—ARBOR VITÆ *American* (*Thuja occidentalis*). This is too well known to need much description; forms a beautiful evergreen shrub or small tree, whether planted singly or in rows for a hedge. It is sometimes found 50 feet in hight. Treat as the Norway Spruce, save that it may be sown in the Fall as well as Spring. Boxes of light loam with an admixture of sand and muck furnish the best soil. It is better, to get this at the nurseries, as noted under No. 90.

No. 110. NEW ROCHELLE BLACKBERRY.—Full directions for cultivation were given in last Volume (Pages 147, 276, 339). They will grow true to kind with few exeptions, and superior varieties may, perhaps, chance to be produced from seed. Sow early in Spring, keep free from weeds, and transplant to rows 8 feet apart the following year.

No. 111. CASTOR OIL PLANT.—See page 19.

No. 112. BROAD LEAVED LAUREL.—A low growing Evergreen, somewhat resembling the Rhododendron. It has beautiful showy blossoms, and bright, broad leaves. Should be sown in rather light soil, mixed with leaf mold. Will be more fully described hereafter.

No. 113. DOUBLE SUNFLOWER (*Helianthus annuus*).—This variety has its entire disk covered with the ligulate petals like those in the ray of the common sort. Grows much like the ordinary sunflower, say seven to ten feet in hight, with large spreading leaves. Is an annual, to be planted in early Spring, or it is sure to come up voluntarily where any seed dropped the previous season. Succeeds on any fair soil, and needs thinning to single stalks 2 feet apart to develop fully.

No. 114. MIXED PETUNIAS (*Petunia in var,*).—These are showy annuals, or even perennials in warm climates and are made partially so in northern green-houses. Plants of semi-creeping habits, flowering profusely from early Summer, until cut down by frost. Flowers tubular, of various hues, from pure white to lilac and purple. Sow in early Spring in open ground, or in a hot-bed if practicable, to forward the period of bloom. Thin to one foot apart, or even more on rich soil. Choice varieties may be taken up and potted on the approach of frosts and will bloom through the Winter, in the parlor.

No. 115. DOUBLE HOLLYHOCK (*Althæa rosea*).—A showy perennial of easy culture, perfectly hardy, and desirable in every collection. It grows 6 to 8 feet high and flowers successively upon a tall spike continuing in bloom for a long time. Sow on a common garden soil, the last of April, or early in May, and thin to 18 inches apart. It will not bloom until the second season, and sometimes dies after flowering a few times, unless the roots are divided.

No. 116. MOURNING BRIDE, or SWEET SCABIOUS (*Scabiosa atropurpurea*).—A perfectly hardy and showy annual, of two feet in hight, flowering from July until cut down by frost. The flowers are of different colors, ranging from lilac to purple, and nearly black. Sow early in May, and thin out to 8 or 10 inches.

No. 117. DOUBLE WALLFLOWER (*Cheiranthus cheiri*).—So called from *cheir*, the hand, and *anthos*, flower, the blossoms resembling the fingers; varies from yellow to violet in color. A perennial requiring some protection in Winter.

No. 118. BEE LARKSPUR (*Delphinium elatum*).—A showy and hardy perennial from Siberia. Its blue flowers are borne on spikes from 4 to 6 feet high. Sow in May and subsequently thin to three feet apart, as each root throws up many stalks. It does not bloom the first season.

No. 119. MIXED CHRYSANTHEMUMS (*Chrysanthemum coronaria*).—These were figured and described on pages 52 and 340 of last volume. Hardy perennials, usually propagated from cuttings or divisions of the roots, but grow readily from seed and flower the second season. They are too well known to need further description, blooming as they do so profusely from September, until killed by the hard Winter freezings. New seedlings of value may be expected from the seed.

No. 120. CLEMATIS *Virginicum*, called also Virgin's Bower.—A native perennial climber of strong habit, attaching itself by its petioles, and growing 15 to 20 feet in hight. Flowers white, of only medium beauty—its fruit, or seed vessels being the most attractive. It forms an ornamental covering for an arbor, or lattice work. Sow in early Spring. Most of its foliage is killed by Winter, but springs up anew from the root.

No. 121. TRUMPET FLOWER (*Bignonia radicans*).—One of the best climbers, with gay bell-shaped flowers of yellowish scarlet color, blooming in clusters from July to October. It is a woody perennial, and does best when laid down and slightly covered in Winter. Propagated either from seeds or cuttings.

No. 122. MIXED CANTERBURY BELLS (*Campanula medium*).—Fine biennials with showy bell-shaped flowers, of white, lilac, blue, and intermediate colors, flowering the second season from seed, on spikes 2 to 3 feet high. Sow in early Spring and transplant or thin out in the Fall, to one foot apart. They will sometimes live 3 or 4 years.

No. 123. GILIA (*Nivalis*).—A delicate snow white an

nual of one foot in hight. Its finely divided leaves give it an attractive appearance. Sow early in May.

No. 124. Whitlavia (*Grandiflora*).—One of the very best annuals, recently introduced from California. It flowered with us July 1st (just 5 weeks from sowing) and continued in bloom until the middle of September. It grows about one foot high and may be thinned to 6 inches apart. Flowers blue and bell-shaped, like the *Campanula*.

No. 125. Standing Cypress (*Ipomopsis elegans*), sometimes classed with the *Gilia* family. A very pretty biennial, not perfectly hardy, with finely divided leaves, somewhat resembling the climbing cypress. Flowers tubular, of scarlet, and variegated colors, borne on a spike 2 to 3 feet and even more, in hight. Continues in bloom several months. Sow in Spring, and slightly protect during the Winter.

No. 126. Long-tubed Centranthus (*Centranthus macrosiphon*).—A delicate but hardy annual, little cultivated in this country, but quite desirable. Grows 10 to 12 inches; high its fascicled flowers, borne in close clusters resembling the Sweet William, and continuing their freshness until killed by frosts. Sow in early Spring and thin to 6 inches distant.

Advertising Information—Gratis....VII.

(*Continued from page* 355—Vol. XVIII.)

We have investigated several advertisements since our last issue, and have received a large number of circulars, etc., from subscribers to whom they have been sent. Among these are lottery schemes by the score; vile sheets called Medical Journals; complaints of loss of money sent to "Dr. Brown" of Jersey City; offers of "Microscopes for 25c.", consisting of a piece of sheet lead, painted black, and having a bit of glass in a hole in the center, got up at a cost of perhaps a penny a piece, and not worth a farthing; positive assurances of teaching how to turn baser metals into gold, all for a dollar; bogus offers of agencies for sewing machines; bogus gift enterprises, etc., etc. Some of these will be described more fully hereafter, together with new things coming up. We have now only room for

[No. 26.]

"Fifty Methods of Making Money.—A competence secured for $1.00!" Such is the heading of a sheet referred to in our last, which we obtained by sending $1 through a friend. This sheet contains some fifty so-called recipes, and by referring to sundry letters we find that in reality we have here in one lot almost all the wonderful, or wonderfully puffed recipes, that have been advertised over the country at various prices from 25 cents to $5 each. One of them has been advertised by some party, and then some other party has got hold of it, and he has advertised the same thing under another name at another place. Few of these recipes are valuable, and such as are, are found in chemical or other scientific books. Our readers will therefore understand that they probably have here about all the wonderful money-making recipes and schemes that they have seen or will see advertised in newspapers or private circulars—no matter what name or description may be applied.

A preliminary note says that "in commencing the manufacture of any of the recipes embraced in these instructions it will be necessary to employ agents to travel and sell. By so doing, from $5 to $10 per day and upward can be realized, etc." Yes, if your agents can find greenhorns enough to buy. Well here are the wonderful recipes, the "fifty ways to make money." [We print them, not on account of value, but to give our readers the whole gist of what is offered by the scores of advertisers.]

No. 1. To Make Fire Proof Paint.—Take a sufficient quantity of water for use; add as much potash as can be dissolved therein. When the water will dissolve no more potash, stir into the solution first, a quantity of flour paste, of the consistency of painter's size; second, a sufficiency of pure clay to render it of the consistency of cream. Apply with a painter's brush. The above will admit of any coloring you please.

[*Remark.*—A bad beginning; what will keep the paint from washing off, even if it were fire-proof, as it would be if *enough* clay were added.—Ed.]

2. Premium Black Writing Ink.—Take 2 oz. extract logwood; 1 gal. soft water; boil slightly, or simmer in an iron vessel 15 minutes; dissolve in a little hot water 24 grains Bichromate of Potash; 12 grains Prussiate of Potash; and stir into the liquid a few minutes while over the fire; take off, and when settled, strain it twice through common muslin or sheeting cloth. The above Ink is a jet black from the first, flows beautifully from the pen, and is so indelible that even Oxalic Acid will not remove it from paper, and costs, when made in large quantities, only four cents per gallon.

[*Remark.*—This recipe has been sold by advertisers, thousands of times at from 50c. to $1. It may be good.]

3. Magic Copying Paper.—To make black paper, lampblack mixed with cold lard; Red paper, Venetian Red mixed with lard; Green paper, Chrome Green mixed with lard; Blue paper, Prussian Blue, mixed with lard. The above ingredients to be mixed to the consistency of thick paste, and to be applied to the paper with a rag. Then take a flannel rag and rub till all color ceases coming off. Cut your sheets 4 inches wide, and 6 inches long; put 4 sheets together, one of each color, and sell for 25 cents per package. The first cost will not be over 3 cents.—*Directions for Writing:*—Lay down your paper upon which you wish to write; then lay on the copying paper, and over this lay any scrap of paper you choose; then take any hard pointed substance and write as you would with a pen.

[*Remark.*—A "greasy affair"—but we believe as good as the "copying papers" usually sold at the price named.]

4. A Pure Vegetable Salve.—One pound lard; ½ oz. Rosin, and 10 ounces elder bark. Boil these over a slow fire for about half an hour, then strain and put into small bottles, which sell for a shilling each.

[*Remark.*—What is the salve good for? A mixture of one ounce of lard to about two ounces of resin makes a semi-liquid salve which is excellent for putting upon tools and all metallic surfaces to keep them from rusting. The above, however, is a safer "vegetable salve" than many others sold in the country, and we should not greatly regret its general introduction, only for the "shillings" people would pay for an article of doubtful utility, and costing next to nothing to make.]

5. Patent Gold and Silver Counterfeit Detector.—Take 1 ounce Nitrate of Silver, pure crystals, and 1 quart pure rain water. Add together, shake well, and it is fit for use. To be put up in drachm vials, and sold for 25 cts. per vial.

[*Remark.*—This has also been sold largely and at a high price, but we can beat it. Your Nitrate of Silver would cost $1.25 per ounce, and much more if absolutely pure crystals. But a whole pound of Nitric acid costs but a few cents, and is far better for detecting base metals. Moreover, counterfeit coins are now so generally galvanized over, that the nitrate tests are of little value.]

6. Art of Painting on Glass.—The only difference between ordinary painting, and painting on glass, is, that in the latter all transparent colors are used, instead of opaque ones, and the colors being ground up with turpentine and varnish instead of oil. In painting upon glass, it is necessary, occasionally, to place the picture between the artist and the light, to enable the artist to see the effect, the light having the property of casting a yellowish tinge upon all colors so exposed. This art is easily learned, and affords a handsome remuneration.

[*Remark.*—This has been often sold at a high price.—Any common painter would *freely* give you more and better information.]

7. A Useful, Easy, Lucrative Employment.

[*Remark.*—This is half a column of stuff about establishing a business and intelligence office; we do not think it worth the room required to insert, and show it up.]

8. The Celebrated Chemical Compound.—Take 1 pint Alcohol, 2 gills Nitrous Spirits Ether, 2 ounces Bichromate Potash, 2 ounces powdered Cinnamon, and 1 oz. Aqua Fortis. Mix all the above together and let it stand 24 hours, and it is fit for use. Bottle in 2 oz. vials, and sell for 25 cents. To extract Grease, Stains, &c., from cloth, saturate with cold water, dip a sponge in the liquid, and apply it, and repeat if necessary, and wash off with cold water.

[*Remark.*—This is too much for us. We don't understand the chemical relations of these ingredients. It may be all right; we should not like to pay much for the privilege of trying it—certainly not $2, as one of our readers once did, and we know not how many others.]

9. The Hunter's Secret.—Take ½ lb. Strained Honey, ½ drachm Musk, 3 drachms Oil Lavender, and 4 lbs. Tallow. Mix all together, and make into 20 pills; one pill to be placed under the pan of the trap when setting it.

[*Remark.*—This is similar to a dozen others sold at 25c. to $5 each. They are made upon the supposition that *all* animals are attracted by the odor of musk, or lavender. If this were the case, a lady we sat by the side of in the cars, the other day, would do well to keep out of the regions of wild animals, or she might find herself surrounded by a large, and not very select or agreeable company.]

10. To Make Soft Soap.—Take 10 pounds of common Yellow or Rosin Soap, such as is purchased for 4 cents per pound; 6 lbs. Sal Soda, and 10 or 12 gallons of soft or rain water. Cut the Soap into small pieces, and put the whole over a fire; bring the water nearly to a boiling point, and allow it to remain at that temperature until the Soap is entirely dissolved. It may then be taken off, and when cooled, it will become thick and livery. The Soap made with these proportions will be found to be too strong, and cold soft water can be added until it becomes of the proper consistency and strength.

[*Remark.*—An old recipe, sold ten thousand times, at varying prices, by advertisers and by traveling men and traveling women. Some of our neighbors paid 50 cents a piece for it. We do not know of any yellow soap sold at so low as 4 cents per lb. A little Sal Soda added to any common soap, hard or soft, makes it more strongly alkaline, but much of it will injure the fabric to be washed.]

11. Patent Starch Polish.—Take common dry Potato or Wheat Starch, sufficient to make a pint of Starch when boiled. When boiling, add ½ drachm Spermaceti, and ½ drachm White Wax; then use it as common Starch, only using the Iron as hot as possible.

[*Remark.*—We suppose every body, at least all our readers, for we have often told them, knows that a little spermaceti added to starch, gives it a higher gloss, and white beeswax has a similar effect, we believe.]

12. To Make Cider Better than that made from Apples, and which does not Intoxicate.—Put in a tub 5 gallons of lukewarm water, 1 lb. 2 oz. Tartaric Acid, 6 Copper Cents, 3 pints Brewer's Yeast, stir until all is dissolved; then add 25 gallons of lukewarm water; let it stand a short time, barrel up, leave the bung out until the yeast is worked off, then bung up, and it is ready for use. It will keep seven years.

[*Remark.*—A villainous, poisonous compound; probably the same as the recipe extensively advertised and sold as "Western Cider" at 25c per buyer. It would be sour, and have the "pucker" of cider, owing to the poisonous copper salt formed by the cents. To follow the directions as above given, would require 'considerable' stirring, for if we mistake not it would take a good many days for the cents to dissolve. Don't touch the compound, and advise your friends not to, unless they would die of slow poison.]

13. Rheumatic Liniment.—Oil of Sassafras, 2 oz; Oil of Hemlock, Oil of Red Cedar, Oil of Turpentine, of each 1 oz.; Gum Camphor and Capsicum, of each 1 oz.; and add two quarts of Alcohol, shake well together. Rub in with the hand or a flannel rag.

[*Remark.*—We can't say whether this be good or bad. Seven ounces of these oils, gum, and pepper, to only two quarts of alcohol would be strong enough to scare out any respectable rheumatism. The ounce each, of oil of turpentine, gum, and capsicum, would be the most that we would venture to add to two quarts of alcohol of moderate strength.]

14. Magnetic Ointment.—Elder Bark, Spikenard and Yellow Dock roots, of each 1 lb.; boil in two gallons water down to one; then press the strength out of the roots and boil the liquid down to half a gallon; and add 8 lbs. best Rosin, 1 lb. Beeswax, and Tallow enough to soften. Roll into rolls, and apply by warming and spreading on linen.

[*Remark.*—This may be a good ointment, but we can not see where the "magnetic" comes in, or comes out; would not the term "magical" do as well?]

15. Indian Pills.—Aloes 3 ounces; Gamboge 1 ounce; Castile Soap 1 ounce; Extract Gentian 2 ounces; mix the articles before adding the extract; then make it into a mass, add water if the extract is not soft enough. While working it up, add by degrees 1 drachm Oil of Peppermint. Make pills of common size.

[*Remark.*—What are these pills good for, and how many are to be taken for a dose, and when? How are we to make a fortune of this one, or of any of the preceding. We are given to understand that with any *one* of these fifty recipes we can make a fortune.]

16. Beautiful Bright Red Ink.—Cochineal 2 ounces, bruised; pour over it 1 quart boiling water and let it stand. Boil 2 ounces Brazil wood in one pint soft water, for half an hour, and in twenty-four hours, mix the two together. Dissolve half ounce Gum Arabic in a pint of hot water, and when cool add to the other, stir well, bottle, let stand one week, then strain through muslin.

[*Remark.*—This will make a *red* ink, but carmine-red ink is much superior, and better for all ordinary purposes.]

17. Superior Blue Ink.—Prussian Blue 6 parts, Oxalic Acid 1 part, triturate with a little water to a perfectly smooth paste, and dilute with the proper quantity of water. Add Gum Arabic.

[*Remark.*—How much gum?]

18. Indelible Ink for Marking Linen without Preparation.—Nitrate of Silver 1½ ounces, dissolved in 6 ounces liquor Ammonia Fortis, Orchil for coloring, 1 ounce, Gum Mucilage 12 ounces. The best extant.

[*Remark.*—This may be the best extant.—What that "Orchil" is for, we don't know. Nitrate of silver will make it *black* enough surely.]

19. Luminous Ink—Shines in the Dark.—Phosphorus ½ drachm, Oil Cinnamon ½ ounce; mix in vial, cork tightly, heat it slowly until mixed. A letter written with this ink, can only be read in a dark room, when the writing will have the appearance of fire.

[*Remark.*—Pretty to play with—but useless otherwise. Any other cheaper oil, flowing freely, would do quite as well. We don't see any fortune in this.]

20. Red Ruling Ink.—Best Carmine 4 grains, rain water 1 oz. Aqua Ammonia 40 drops, add a little Gum Arabic water.

[*Remark.*—Probably good, what there is of it.]

21. Yellow Ink.—A little Alum, added to Saffron, in soft hot water, makes a beautiful Yellow Ink.

[*Remark.*—A yellowish fluid, of no practical value—no fortune here!]

22. Invisible Ink.—Sulphuric Acid 1 part, water 20 parts; mix together and write with a quill pen, which writing can be read only after heating it.

[*Remark.*—Of very little utility.]

23. Superior Water Proof Composition for Leather.—Boiled Oil 16 parts, Spirits Turpentine 2 parts, Beeswax and Rosin 1 part each, Venice Turpentine 2 parts; mix and use hot.

[*Remark.*—What kind of oil?—How hot on leather.]

24. Gun Powder.—Nitre 76 parts, charcoal 14 parts, Sulphur 10 parts; mix.

[*Remark.*—Just so. Please send along the recipe for getting up the Powder mills, and the careful hands to work them, and also the required capital.]

25. Shaving Soap.—Take 4½ pounds White Bar Soap.

1 quart rain water, 1 gill Beef's Gall, and 1 gill Spirits of Turpentine; cut the soap thin and boil five minutes; stir while boiling, and color with half ounce Vermillion; scent with oil of Rose or Almond.

[*Remark*—Too much gall and turpentine, and vermillion, for a pleasant soap to think of. But we can't make the fortune out of this, without another recipe for inducing men to shave (their faces) more than they now do.]

26. HARD SOLDER.—Copper 2 parts, melt; add tin, 1 part.

27. SOFT SOLDER.—Tin 2 parts, Lead 1 part; melt.

[*Remark*—What shall we melt the copper in? What shall we use the hard solder for? Rather too much tin in the soft solder.]

28. SILVER PLATING FLUID.—Dissolve 1 ounce of Nitrate of Silver in crystal, in 12 ounces of soft water. Then dissolve in the water 2 ounces Cyanuret of Potash. Shake the whole together, and let it stand till it becomes clear. Have ready some half ounce vials, and fill them half full of Paris White or fine Whiting; and then fill up the bottles with the liquor, and it is ready for use. The Whiting does not increase the coating power, it only helps to clean the articles, and to save the Silver Fluid, by half filling the bottles.

[*Remark*—This, without the Paris White, will usually leave a thin film of silver on bright metal surfaces, but needs the aid of a galvanic battery to deposit a durable silver coating.]

29. GREAT PAIN EXTRACTOR.—Spirits of Ammonia 1 ounce, Laudanum 1 ounce, Oil Origanum 1 ounce, Mutton Tallow half pound; combine the articles with the tallow, when it is nearly cold.

[*Remark*—Does the adjective great refer to the "pain," or to the "extractor"? We don't know how great a pain .his would extract.]

30. MATCHES.—The ends of the tapers, or wood, should be very dry, and then dipped in hot melted Sulphur, and laid aside to dry. Then take 4 parts of Glue, dissolve it, and when hot, add 1 part of Phosphorus, and stir in a few spoonfuls of fine Whiting, to bring it to proper thickness.

[*Remark*—We tried this when a boy, but the phosphorus would take fire when added hot, or heated. Moreover, the match factories furnish ready made matches cheaper than we could whittle out the wood. Home-made matches don't pay, now-a-days.]

31. PROCESS OF TAMING HORSES.—This consists in using a medicine. There are three different articles used. The medicine has the effect to make the horse remarkably affectionate. It creates fondness, and you keep this fondness up by kind treatment, &c. The articles are used in the nostrils. One is a powder, the other articles are Oils. The powder is used first. A common sized quill full in each nostril, of the powder, and two drops each of the oils. The first article used is the button from the horse's leg. You procure this and dry it, and pulverize it as fine as you can; then use it as stated above. The oils are the oils of Rhodium and Cumin. This will cure stubborn horses, that refuse to work, &c. Some make high wages by breaking cattle and horses by this process.

[*Remark*—This nonsensical and utterly absurd recipe has for a long time been advertised and sold to the more ignorant classes at prices varying from $1 to $5. Only last Summer a man tried to hire us to insert an advertisement offering it to any one who should send him $2. He professed to have got his information from Mr. Rarey.]

We have not room for the remaining 19. These will be given in our next, with notices of some other "advertisements."

Scientific and Practical Talks about Manures....I.

INTRODUCTORY—HOW PLANTS GROW.

Many millions of dollars are annually expended for manures in our country, especially in the Eastern or older sections. At the West, where a virgin soil is yet rich in organic treasure—the leaf-mold and the grass-mold accumulated during centuries past—the subject of manures has not required nor received much attention; yet the constant disappearance of these natural deposits, and the economy of husbanding the materials now in possession, an nually render this subject more and more important to Western cultivators. It is not a fanciful or hap-hazard assertion to say, that for all the time and labor expended in accumulating and applying fertilizers, the country over, the returns, the profits, are not half what they would be if people knew just when and how to apply these fertilizers to the best advantage. The subject of manures is, therefore, one of the highest magnitude, and demands constant attention.

We have been almost censured by some for the comparatively little space we have hitherto devoted to so important a subject. It may be said in excuse, that we are unwilling, on this or any other topic, to try to enlighten others where we are ourselves in the dark, merely for the sake of appearing to be wise. The theory of manuring is not fully understood. The most erudite scientific men are yet groping in the dark; even Liebig has had occasion to change his views and his teachings more than once within twenty years. The agricultural chemists, who were yesterday all confident in their mineral theories, are today hesitating, doubting, retracting. In illustration of this we cannot do better than to repeat a recent quotation from Prof. Johnson, who spent a year or two with Baron Liebig, and whose constant devotion to the science of agriculture, entitles his opinions to weight. He says:

"We are every day drifting further from what but a few years ago was considered one of the most fixed and beneficial principles of agricultural science; viz.: that a substance is chiefly a fertilizer because it directly feeds the plant; and are learning from the numerous recent and carefully conducted experiments with manures, that in very many cases we cannot safely venture to predict what will be the influence of a given application; but find in practice the strangest and most discordant results, it being possible to show from the experiments of the farm that almost every fertilizer in use has, in some instances, proved beneficial to every cultivated crop, and in other cases has been indifferent or even detrimental."

Among the most intelligent cultivators the greatest diversity of practice—practice founded upon observation, too—still exists. Our own former opinions, once thought to be surely founded, are constantly yielding to new light, and we confess to having less and less confidence in what *now* seems to be well established theory. We must then be excused for hesitating in discussing theories where so much doubt yet exists.

Still, the best way to arrive at correct conclusion is to agitate the subject, to state theories, to collect facts, to make experiments, etc. We purpose to take up the subject of manures in a somewhat formal series of articles, introducing what appears to us to be the best theory of the action of manure, and the best practice derived both from theory and observation. This discussion will be valuable to every cultivator.

As manures are designed to enter into or stimulate the growth of plants, it will greatly assist to an understanding of the subject if we first briefly inquire in a general manner

HOW PLANTS GROW.

When a seed of any kind is placed in the soil near the surface, with the aid of warmth, moisture, and air, it germinates or sprouts. One little shoot, called a *radicle*, grows downward, and sends forth branching roots. Another shoot, called a *plumule*, starts upward towards the light. At first these shoots are nourished by the substance or meat of the seed. But afterward, the roots, or leaves, or both, gather food from the air.

As fast as food is obtained and appropriated, the plant increases in size, and constantly sends out new leaves and new rootlets. The process of growth is similar in all plants—in grasses, grains, trees, etc. The spire of grass or of grain gets its food, circulates its sap, and increases in bulk, as does the apple tree or oak.

Let us now, for convenience of illustration, take the partly grown tree, and inquire where and how it gets its food, remembering that all wild and cultivated plants are nourished in a similar manner. If we carefully wash away the soil around a stalk of growing corn, or the base of a tree, we shall find the larger roots subdivided into smaller and smaller branches, until they terminate in an immense number of minute fibers (many millions on each plant), the smaller ones being too minute to be seen without a magnifying glass. The roots draw in water or sap from the soil, and carry it to the base of the stem. This water or sap contains dissolved matter, which takes part in the nourishment of the plant. The roots serve not only to gather sap, but they also attach the plant to the soil, and sustain it in an upright position.

The roots converge at or near the surface of the ground, and form the *stem* or trunk. This consists essentially of long fibers closely packed together, with contiguous cells extending from the roots up to the leaves. The branches or limbs are only subdivisions of the trunk itself.

The *leaves* are in reality an expansion of the stem above, just as the roots are an expansion of its lower end. The frame-work of the leaves, is made up of a series of cells packed together in two layers—an upper and lower one—and covered over with a thin layer, or *epidermis*.

It was formerly supposed that the food of the plant came from the ground. This is a mistake. The greater part of the plant food comes from the air. [Just how much comes from the soil, and how much from the air, and whether the food is mainly carried into the plant through the leaves, or chiefly through the roots, dissolved in rain water, are points upon which scientific men differ. These are important questions, for upon them depend the theory and practice of manuring, the best kinds and forms, etc.]

Illustrations.—1st. A few feet of soil, made up chiefly of clay and sand, will bear a majestic tree, containing many cords of wood, in which are scores of bushels of charcoal. This wood and this charcoal could not have come from the few feet of clay and sand. 2d. A few pounds of grass seed on an acre of loam (sand and clay) will yield tun after tun of hay, without diminishing the soil in bulk. In fact the soil is increased somewhat. This hay can not come from the soil. The truth is, *the great bulk of trees, of hay, of corn, and of all other plants, comes from the air.* 3d. When a log or a heap of manure rots, or when wood and coal burn up, they are not annihilated; but their little particles go off into the air, one by one, and float about unseen. These separate particles are each so small that we can neither see them depart, nor see them after they are in the air. Nor can we see them as they are again gathered by the leaves, or by rain water, until a great number are united together in the plant. But it is nevertheless true that new plants are thus made up of the very materials of which other plants were previously composed. And so the process of decay and new growth goes on in one continual round.

These general explanations will be found useful in discussing what kinds of manures to use, and how to apply them, which we shall talk about hereafter.

Chloroforming Bees.

We have heard of several instances where chloroform has been used to stupefy bees in examining hives for moths or other purposes, in removing honey, and in transferring bees from one hive to another. It is only necessary to close the hive sufficiently to prevent egress, and then place in it at some point, a sponge or cloth saturated with a little chloroform so as to fill the hive with the vapor. As soon as the bees are sufficiently stupe-

fied, open the hive, perform whatever operations are desired; then ventilate with fresh air sufficiently to remove any remaining vapor, and the next morning the bees will be as active and lively as if nothing had happened to them. No harm will ensue, if the chloroforming be not carried on at first to a needless degree and length of time.

Bees Swarming Without a Queen.

[We have a large accumulation of communications on Bees, some waspish, some honied, and most of them need combing. We are retaining them in our hive until we can get a little more time to strain out the real honey they contain.—Ed.]

To the Editor of the American Agriculturist:

As an indication that the queen does not always announce when the young swarm shall leave the old hive, I will relate an incident as it transpired some years since at my apiary.

In our Southern country, where the heat becomes oppressive sometimes as early as April and May, the bees congregate on the outside of the hive in large numbers, so as to give the insiders more air and room for the proper rearing of the young. At several of my hives these outsiders, thus early, were very numerous; rather an indication of early swarms. One of these hives refused to swarm, although exceedingly strong in bees. Most of the other hives swarmed in June. On July 3d, I discovered great uneasiness among the outsiders of this hive, and this continued during the entire day. I became uneasy lest they might be killing a queen. On the following day the agitation among the numerous outsiders became still greater; and at one o'clock they all, at one time, left the hive, swarmed a short time, and, finding that the insiders would not join them, they bolted back into the hive. After a short delay out they came in increased numbers, settled, and were easily hived. When they returned to the hive they first imparted their agitation to all insiders, then took their farewell stock of honey in, and swarmed in regular order. This novel proceeding I have witnessed several times; but all hives that have thus thrown out a swarm have invariably died off, probably for the want of a queen, which was in this irregular way forced to leave the hive. J. B.

Forsyth Co., N. C.

Why Don't the Hens Lay?

To the Editor of the American Agriculturist:

Last Summer my one dozen hens gave me nine and ten eggs regularly every day—Sundays not excepted; but now, when the neighboring grocer charges "four for a shilling," (three cents each,) the egg fountains, as old Diogenes has it, are all sealed up, and 'nary egg' has been the tune for a long time. Pray, sir, what is the cause of this falling off? It cannot be for the want of food, as I make it a point to keep corn constantly by them; and when there is no snow on the ground, I give them water. There is also an open hovel that they can take shelter under and roost in, although I find many of them prefer to spend the night in the tops of the neighboring apple trees; and, singular as it may seem, the colder and more forbidding the night, the higher they go for a roosting place. Now, if there is anything more I can do for them, please inform me, a recent subscriber to the *Agriculturist.* J. S. Angell,

Addison Co., Vt.

Remarks.—In the Summer the fowls obtained an abundance of animal food—worms, grasshoppers, bugs, and other insects. In the Winter these supplies are cut off. Try feeding them daily with bits of refuse meat, and see how eagerly they will devour them. Some kind of animal food is almost indispensable for laying hens. Milk, or milk curds, make a good substitute. Scraps or meat cake, easily obtained in large quantity and cheaply from the lard or tallow triers, are very good for fowls. (In this city it is sold at a low price, in large cakes, the size of a barrel head, and eight to twelve inches thick—sometimes in square form.) The price is usually about $20 per tun—one cent per pound. Let the fowls have meat in some form. In Summer they get green vegetables. In Winter let them have cabbage leaves, turnip tops, or potatoes or turnips boiled. Corn is passably good for fattening, but not to make eggs out of alone. Oats contain more egg material. To lay *well* they should have warm quarters, where water will scarcely freeze. Let them always have plenty of unchilled water; snow is a poor substitute. They want a scratching place, or, at least, access to gravel; and without lime they cannot make egg-shells. Finely-powdered bones or oyster shells, or old mortar, supply lime, which they must have in some form. They have constitutional objections to laying eggs without shells. An ash heap, to roll in is good to keep off insects. Access to the sun on warm days they will plainly show you is a treat they enjoy. In short, give them meat or milk for animal food, with some soft vegetables; lime, to make shells of; plenty of water to drink and supply the liquid part of the egg; as much mixed grain as they like to eat, and gravel to grind it with; clean, warm houses and nests, with air and sunlight, to keep them healthy, and you will unseal the egg fountains. The nearer their Winter food and habits can approach to those of Summer, the nearer will the supply of eggs be equalized.

For the American Agriculturist.

"Westward Bound."

Doubtless, there are many attractions in farm-life at the West. The fertility of the virgin soil, the abundance and cheapness of land, and the comparative ease of cultivating it—especially prairie-land—the satisfaction of gathering large crops, and the prospect of rapidly acquiring wealth; these and the like things make many young farmers at the East discontented with their lot, and lead some annually to sell their homes, and to push towards the setting sun.

Some succeed according to their expectations; but very many do not. Land purchased, proves inferior to what it was represented; the improvements needed upon it, absorb all the profits for many years; contemplated railroads, or other facilities for getting crops to market, are not constructed; sickness in new forms invades the household; long separation from old friends and kindred begets sadness and discontent; and, finally, nearly all the members of the family mourn the day when they set out to seek their fortunes at the West.

We, by no means, counsel all young farmers to remain at the East. "Westward the star of empire takes its way," and many should follow it. But let every man think twice before he makes the final resolve. It is no light thing for one already comfortably situated, to sell out house and home, and start in life again amid untried scenes. Even if ordinarily successful in acquiring property, he is compelled to sacrifice many things of great value. This is especially so, if the homestead he sells, is one which has descended to him from his ancestors, and if he is surrounded by kindred and friends whom he has known and loved from childhood. The land he would sell, bears traces still of his forefathers' footsteps. The house was also the home of those who gave him birth. Yonder fruit-trees were planted by his father. His grandfather set out the venerable elms which overshadow the lawn and the gates by the roadside. By the little brook, overhung with willows, he played with his sisters in childhood. Across yonder field winds the foot-path where he went to the village school. Beneath those maples, at the corner of the street, he plighted his love to the fair maiden who has since become the mother of his children. From his window he hears the Sabbath bell which called his fathers for several generations to the house of God; and, not far away, is the burial-place where their sacred dust reposes.

He who sells out such a home, parts with something which money can not buy, but whose value he does not fully appreciate until he has lost it. He separates himself from scenes and influences which can not possibly be found in a new country, however fertile its soil or beautiful its scenery.

[Remarks.—With the general spirit of the above we freely concur. When one *can* remain upon the old homestead it is advisable. The same energy and active enterprise which would secure competency and wealth at the West, would almost invariably renovate the old farm, and bring it up to a high point of fertility and profit. But there is not always room in the old hive for all the young swarms. Some must go forth, or be driven forth, to seek new quarters; and such can often do better at the West, where cheap land and a virgin soil invite their occupation. If a young couple start out early, and locate not too far into the wilderness, the chances are, that in our rapid growing country, society, schools, and churches, will be well under way by the time their children are old enough to greatly need them. We certainly think it better for some of the younger members of a neighborhood to push out to unoccupied fields, taking each other's sisters with them as helpmates, than for half a dozen sons, more or less, to hang like drones around the old hive.

We have witnessed many a parting scene, where one or more of the sons and daughters from a household were taking their leave of the paternal roof, to strike westward, full of buoyant hope; and, though there are always certain melancholy thoughts at such times, yet, on the whole, the season is one of great interest to us. The young men and women thus starting out, are going to take their places as actors in the great and growing western portion of our Confederacy. And they make worthy citizens there. We have traveled in the far West somewhat, were born and brought up in what was once considered "*the* West," and we but speak what we feel and know, when we say that these western people who have early left the eastern hives, are among the most enterprising, worthy, substantial citizens of our land. Let those who can find room, and who are so inclined, remain East—the more the better—but we would not discourage the young, the active, the enterprising, from seeking their homes and their fortunes towards the setting sun.—Ed.]

Standard of Value.—The worth of every thing is determined by the demand for it. In the deserts of Arabia, a pitcher of cold water is of more value than mountains of silver and gold.

For the American Agriculturist.

How Stand your Accounts?

[The general tenor and spirit of the article below we readily endorse. On large farms, and even those of moderate size, the books for accounts recommended should be kept. On small farms, where there are but few transactions, one or two books will suffice, with different pages allotted to the several topics to be noted down. In some cases a few sheets of paper, stitched together in book or pamphlet form, will answer as a temporary resort, at least until it is practicable to get a good, well bound, permanent farm book. Keeping accounts, and writing down in a journal the various transactions upon the farm, is a capital exercise for the boys, and the girls too. Had we not early learned to use the pen, and to express our thoughts, by keeping a full minute record of all that transpired upon the farm, even to the smallest item, we are quite sure we should not be using our pen here to-day.—ED.]

Not one farmer in ten has any system of book-keeping, by which he can tell at the close of each year how he stands with the world. Most farmers probably have an account of their debt and credit with those with whom they have business dealings, but they keep no account with themselves. No estimate is made of the articles consumed by the stock, or by their families; and no account is kept with particular crops, or particular fields, to know whether one crop pays better than another, or whether they pay at all. Accurate knowledge of the cost of crops, of the cost of animals sold for meat, of the profits of raising poultry, beef, pork, or of any item of farm economy, is the rarest of all knowledge among cultivators. One is occasionally met with who is booked up, and can show you, in black and white, what it costs to support his family, what are the expenses of each crop cultivated, what field gives the best returns for the labor expended upon it, and who is able to tell whether farming pays, and how well it pays. But such a farmer is exceedingly rare.

The common practice is to keep as even with the world as possible, and to leave the rest of the business to take care of itself. It is well known that farmers are more slack in keeping payments square than any other class of business men. They trade and barter with each other; "pay in their way," as the phrase is, which means to pay in anything the creditor happens to want, when it suits the convenience of the debtor to pay it. If the farmer sells a lot of fat wethers to the butcher on three months' credit, he expects his money at that time. But if he sells a lot of stock sheep to his neighbors, he will not insist upon any particular time of payment, and he will get his pay in two years, perhaps, in a pair of steers. Not unfrequently accounts so run on unsettled five, ten, and even twenty years.

Now, all this is bad policy. "Long friends and short credits" is as sound a maxim for the farmer as for any other class of the community. If the farmer has anything to give away, let him give it, and settle the account of charity. But in the way of business he should school himself to be prompt in payment of debts, and compel the same promptness in others. It is essential to his own peace of mind, and to his success in business. A farmer can no more afford to do without account books than a merchant. He should accustom himself to clear ideas of his business, to know what belongs to capital invested, what to working expenses, and what to profit. It is in this way only that he can tell at the close of each year whether he has gained or lost. He should bring himself to account at the close of every day for every pecuniary transaction he has had with others.

A proper system of accounts for a farmer is, first, a *cash book*, in which are entered all monies received and paid out; second, a *journal*, containing all deliveries of stock or farm produce, and all articles received; third, a *stock book*, in which should be entered all additions to the animals, tools, land, and everything that constitutes capital in the business, and all subtractions from the same; and fourthly, a *ledger*, in which separate page accounts should be kept, debt and credit, with all persons with whom he has business dealings. Besides these, it is important to have a *wages book*, showing, at a glance, how the account stands with each laborer upon the farm, and how much is paid out for labor, and an *invoice book*, containing all bills of account. It is also of great importance to keep accounts with particular fields, to ascertain what are the returns for particular crops, under a given mode of treatment.

The farmer should always have some experiment on hand, suggested by his own reading and observation, risking more or less according to his means. In this way he will gain some definite knowledge every year, and his brain power will increase with his capital. Nothing is wanted more than a good system of book-keeping upon the farm. It, of course, involves some expense, and considerable time and painstaking; but it will pay better than any other labor, for it will show what labor pays best, and give a wise direction to all operations upon the farm. Now is a good time to commence farm accounts.

For the American Agriculturist.

Errors in Shoeing Horses.

[The proper shoeing of horses is an important topic. There are comparatively few good shoers even among old blacksmiths, as almost every one knows by experience. We have a horse that, though shod by an "old hand at it," would somehow get lame. A change of shoers stopped the lameness; and this is the experience of many others. Any hints on the subject will be gladly received. The following is from a practical blacksmith, who says, "It is poorly done, as a blacksmith's hand is in poor order to write in cold weather." The writing was certainly well done; the correctness of his advice we leave for discussion by his fellow artisans. If they have any exceptions to make, let us have them. We would almost be willing to print an error or two, just to wake up a discussion on a subject of so great interest to horse owners, as well as horse-shoers.—ED.]

Crippled and hoof-bound horses are becoming more and more common where they are used on hard roads, and the methods of shoeing adopted by many blacksmiths to prevent lameness, in the opinion of the writer, only increase the evil. Usually shoes are made with the nail-holes too near the toe. This leaves the heel unsupported, and throws the strain, in traveling and pulling, about midway between the heel and toe, which is the weakest part of the hoof. Often, when the shoes are removed, the sole of the foot is found torn loose from the hoof at the heels, leaving sores called corns. This is more common with heavy wide-footed horses, though the same style of shoeing will produce it in all.

Burning the hoof with the hot shoe, to fit it to its place, is often practiced. A number of years' experience has taught me that this should not be done. When a horse's hoof is properly trimmed, the sole is less than a quarter of an inch thick: burning will crisp and destroy the life of the seam, causing the sole and hoof to separate. This is followed by sprawling and rottenness of the hoof, lowering of the sole, turning up of the toe, and general ill-shape of the foot, and the horse becomes a clumsy cripple.

Horses likely to become hoof-bound, generally have small, tough, horny hoofs of rapid growth; but, with proper care, they may be kept free from lameness. If the shoe be not properly fastened near the heels, it causes the toe to incline forward, the sole becomes hard and dead, the heels contract and the frog is injured. Lameness must follow from the action of the coffin joint being retarded.

To keep the foot in its natural shape the shoe should be made to fit wide at the heels; the "calk" should stand square, inclining a little outward. The shoe should be nailed well back towards the heels, say from an inch and a quarter to two inches from the calks, thus securing it solidly from heel to toe. When the foot is in its natural shape, as strong a nail-hold can be had at the turn of the heel as anywhere about the hoof.

The clip, or upward projection from the shoe, used by many, is worse than useless. The hoof is weakened by the notch made to receive it, and is injured by the burning given to fit it in. By this treatment horses whose feet have been worn short at the toe, have often been lamed by crisping the sole and affecting the quick, causing it to fester in a few days after shoeing. After a horse's feet have been thus maltreated, it will most generally take from six months to a year's proper care to restore them to a sound condition.

A shoe properly put on should remain from ten to fourteen weeks. If a horse is shod oftener than once in two months, there will not be sufficient growth to afford a solid hold for the nails.

Dearborn County, Indiana. M. B. KERR,

HOW MANY HORSES.—According to the new American Cyclopædia, the number of horses in the world is estimated at fifty-seven millions, (57,420,000,) or one horse for every twenty-one inhabitants, young and old. In Europe there is one horse for every eleven persons. Denmark has forty-five horses to every one hundred inhabitants, or nearly a horse for each two persons. The United States are put down as having 5,000,000; France, 3,000,000; Russia, 3,500,000; Great Britain, including Ireland, 2,500,000; Austria, not including Italy, 2,600,000.

A SHREWD WORKMAN.—A journeyman weaver took to his employer a piece of cloth he had just finished. Upon examination, two holes but half an inch apart were found, for which a fine of two shillings was demanded. "Do you charge the same for small as for large holes?" asked the workman. "Yes, a shilling for every hole, big or little." Whereupon the workman immediately tore the two small holes into one, exclaiming, "that'll save me a shilling anyhow." His employer was so well pleased with his wit that he remitted the whole fine.

Friendship is more firmly secured by lenity towards failings, than by attachment to excellences. The former is valued as a kindness which cannot be claimed, the latter is exacted as the payment of debt to merit.

Common swearing argues in a man a perpetual distrust of his own reputation among his fellows.

Cutting Feed too Short for Stock.

To the Editor of the American Agriculturist

My cattle have abundantly paid me for helping to do their chewing by using a feed cutter. They take hold of straw and stalks much better than formerly, partly perhaps because it is so much more convenient for them, but principally, no doubt, because of the shorts, bran, or ship stuff, mixed with it, which I find make it as good as hay. It always appeared to me, however, that there was danger of having too much of a good thing, by cutting straw too fine, and leaving stock little or no use for their teeth. One of my neighbors has found this out to his cost. He keeps several horses, and has cut their feed, principally oats in the sheaf, quite fine, less than an inch long. He lost three horses last season from inflammation in the stomach and intestines, caused without doubt by their having swallowed much of their food without chewing, where it remained undigested. From an inch and a quarter to an inch and a half is about right. I think that some people make a mistake in cutting up too large a quantity of hay or straw at one time. One man attaches his horse power to a large cutter, and runs through hay and straw enough to last him a week or a fortnight. Before it is used up the goodness is pretty well dried out of it, and it is too much like chips, to taste well to the cattle, or to be of much service to them—this at least is the opinion of JONATHAN.

REMARKS.—We think Jonathan is mistaken. Our rule is to cut the feed as short as possible, for horses especially. We see no more danger of their swallowing short bits of straw, than there is of swallowing oats unmasticated. The horses referred to must have taken sick from some other cause than eating short cut feed. For ruminating animals, that is those that chew the cud, it is well to let them have long feed enough, mixed with the cut stuff, to make up the cud balls in the stomach; but for horses and swine we would cut the straw as short as possible. We cut all the hay for horse feed, and the greater part of that for cows. Nor is there the danger of drying out, when a mass of hay and straw is cut up, and left in a pile. A little water may evaporate, but it is replaced when the food is wet for mixing with the bran or ship stuff.—ED.

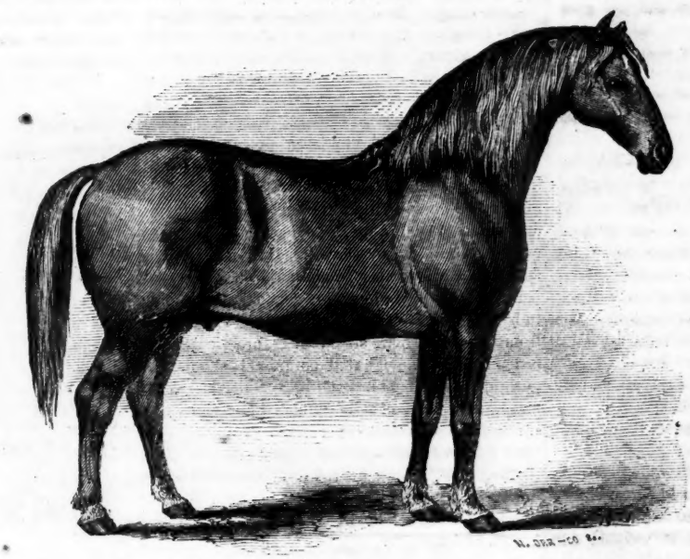
"Hungarian Grass" bad for Horses.

To the Editor of the American Agriculturist.

Last Winter several horses in this vicinity became seriously affected with stiffness of the joints, so much so as to be scarcely able to walk. In nearly every case they were in good condition when attacked, having been well fed on Hungarian hay or millet. The season was very severe on work horses—an open Winter and mud deep. But as animals fed on other hay were exempt from the disease, the general belief is, eating Hungarian hay was the cause of the difficulty—not perhaps the hay itself but its seed. Here it is allowed to mature its seed before cutting. Perhaps for horse feed it should be cut while in blossom. One of my neighbors fed it to sixteen cows and says they gave more milk and did better than ever before. For feeding to cattle I think the testimony is all in its favor. W. L. J.

Elvaston, Hancock Co., Ill.

REMARK.—The above is rather inexplicable. The so-called "Hungarian Grass" is a millet, and we should doubt its injuring animals eating either the straw or seed. Perhaps the horses referred to were fed too high, or there may have been some other special cause wholly unconnected with the kind of feed that was given.—ED.]



AN AMERICAN CART HORSE, AND ROADSTER.
(Engraved for the American Agriculturist.)

The Cart Horse.

American cities have now become so large and numerous, that they require an immense number of cart horses to do their work. We do not know of any systematic course among our farmers of properly breeding this highly valuable and much wanted variety of the horse, nor do we believe such to exist at present, to any great extent, in any district in the United States. The large wagon horse, as bred by the descendants of the Dutch settled in Pennsylvania, comes nearer the desideratum than anything within our knowledge; but as a general rule these horses are deficient in several important particulars. We speak in *general* only, as there are occasional individual exceptions among these animals, which closely approach perfection, and may serve as models.

The beau ideal of a cart horse may be found in the celebrated painting of the "Horse Fair," by Rosa Bonheur, particularly in the figure of the Norman dapple grey, and two or three others in the foreground. Few out of our city, however, have the advantage of seeing that celebrated painting, and we have therefore endeavored to get up an engraving of a cart horse, somewhat refined on the European model, and better suited to American taste. But the artist has not caught our idea exactly, as the figure should have shown still greater strength and solidity than it does. Such a horse will do pretty well, however, for the cart, and makes an admirable roadster.

The cart horse should be 16 to 17 hands high over the withers, and weigh 1300 to 1500 lbs. He should have a fine head and well set neck; short, strong back; deep, full quarters; wide chest; upright shoulders, rather than oblique; wide, sinewy, flat legs, as clean of hair as possible; short, strong pasterns; clear hoofs, rather broad than otherwise; heels well set up, being the reverse of flat footed. He should have a fast walk, his ordinary gait three and a half to four miles an hour; be docile and courageous.

To obtain such animals as rapidly, and at the same time as cheaply as possible, American farmers should import the best and most suitable Norman or English stallions. The walk of the best bred of these animals is not only quick, but their trotting action is fine, and fully equal to five to seven miles an hour over a good road, drawing a heavy load after them. These qualities not only fit them for the city dray, but also for all kinds of farm and general road work.

Large, well-bred mares should be selected and bred to these stallions, when the produce would be found all that is required. Our farmers might commence moderately working colts thus bred, at *two years old;* for if well fed and cared for, at this age they are as strong as ordinary horses at three and four years old, and are perfectly able to do all ordinary kinds of farm work. The breeder thus gains one to two years on every colt he raises, thus greatly cheapening their production. At five and six years old they may be taken to the city for sale, where they would readily command from $200 to $300. This is the best English system of rearing cart and heavy road horses, and our farmers will see that it can be as easily practiced here in America. In fact, it is already done so to some extent in Upper Canada and the Western part of the State of New-York, and other districts. A Norman stallion or two have been introduced into New-Jersey and Pennsylvania. The writer now has the get of one of the above, at work in this city in a dray, and another, the produce of a Sussex stallion. Both of these are excellent cart or road horses, and make a good figure in harness.

A Good Talk on Cattle Breeding and Feeding.

At the recent annual meeting of the Agricultural Society of East Derbyshire (Eng.), Dr. Hitchman, made some off-hand remarks on selecting, breeding, and the care of cattle, which were characterized by most excellent, sound, practical common sense. We subjoin from the Derby Journal the following report, which will be found worthy of perusal by every reader of the *Agriculturist.* The allusions to this country are flattering, and will be especially gratifying to such men as Mr. Thorne, and others, who have so liberally devoted their wealth to securing for our country the best cattle in the world. But hear Dr. Hitchman:

We are living in an age of intense competition, and need all the aid we can afford to each other. Other nations are emulating our industry; our brother Jonathan, on the other side of the Atlan-

tic, is "going ahead" as to agricultural matters in boldness—if not in discretion. His agricultural implements are of the most simple and effective character; and his zeal is shown in the fact, that he does not hesitate to give a thousand guineas ($5000) for a very first class Short Horn bull. This is, indeed, a "fancy price," and one which few even ardent patriots could afford, yet, nevertheless, *Jonathan is wise in his generation.* The consumption of meat in this country is becoming enormous. London alone requires two millions of sheep and upwards of five hundred thousand beasts for its annual supply. And, again, when we reflect upon the energetic labors that are going on in our mining districts, when we learn that Derbyshire, with some aid from its sister county, Nottingham, raises nearly four millions of tons of coals annually, we can not but conclude that the men who perform these enormous labors must require a large supply of animal food.

The Short Horn tribe of animals is peculiarly adapted to the rich lands of Kentucky, and America is determined to cope with us in "meat-stuffs," as she already does in "bread-stuffs," and as a nation we must look to our laurels. Mr. Russel, of Kilwhiss, in Scotland, states that he saw at at Springfield, in America, a very large show of Short Horn cattle, and he does not think that at the Royal Agricultural Show at Windsor, in 1851, the general stock was so universally good. The American, by importing such bulls as the "4th Duke of York," and such cows as those of the "Duchess" tribe, places himself at once in the same position for success as England was in 1810—when Charles Collins's magnificent bull "Comet" was almost the sole fountain, from whence have sprung the hundreds of fine animals which now graze in the valleys and uplands of this beautiful country. America acts wisely in selecting well formed animals of the "Duchess" tribe to found a race, for they possess intense vital force, and impress their own characteristics upon their offspring; as a proof of this, I may mention, that three years ago, prior to a sale at which, among many others, some alleged animals of the "Duchess" tribe were to be sold, I went into the field where the ticketed cows were feeding, and giving the catalogue, into which I had not looked, to a friend, I said: "Now, let me see whether I cannot pick out for you every heifer that is alleged to be descended from the '4th Duke of Oxford,' through a cow that is herself well bred;" and I did so without a single error. I mention the fact as an illustration of how distinctly qualities are handed down from generation to generation by special individuals.

But, gentlemen, valuable, unspeakably valuable, as is a long descent; much as I esteem and love a pedigree, yet I hold it to be the veriest folly to give high prices merely for a pedigree; to value an inferior animal merely because it has descended from fine race. Such folly will almost always end in disappointment. I have known heifers purchased at 60 guineas, ($300) which were not worth 20*l.* ($100) in any market in England; they were small, misshapen animals of low quality; they had narrow chests, hollow shoulders, flat sides, and thin flanks, but wherewithal a pedigree so long, that it bothered the printer to find "g, g, g, g's" enough and "r r r's" enough to print the catalogue in which were detailed the great, great, great ancestors of these abortions. No lineage, however high, can compensate for such defects. One deformity, in a cow of strong vital force, may be impressed upon its offspring through many generations, just as the good qualities of an unpedigreed bull—a bull without a registered maternal grandfather, "Hubback"—have been handed down for nearly 80 years, and are seen in some of his progeny to this very hour. Some people are perfectly infatuated with the "Herd Book;" they are spell-bound by its records, and seem to disregard other circumstances, if we may accept their purchases as the tests of their opinions; but this of itself will not suffice to produce a first-class herd of cows, or sheep, or pigs. *Secure pedigree whenever you can,* but do not omit form, quality, size, and what, for want of a better term, I will call life-vigor, and by this I mean strength, activity, and a stately, lively carriage, and if to these you can join docility of temper so much the better.

I repeat, many animals imprint their own characteristics upon their offspring through many generations, and when you have a good animal of this kind it becomes priceless, and with care and proper management may be serviceable for many years. We deal with artificial forms; special and even accidental characteristics have been arrested in the individual, and been stamped upon its progeny; what we term our best-formed animals are wide departures from the primitive type, and we could secure for our successors, if not to ourselves, still wider deviations from existing forms, if such were deemed advisable. These facts, I think, prove how very particular we ought to be as to the qualities of the individual animals from which we rear stock. For practical purposes it is not enough that an animal should be pure bred. It should in itself be symmetrical, full-sized, handsome, of good "touch," and vigorous, if retained for breeding purposes. No pedigree, however high, can be an equivalent substitute for these qualities—in short, we desire *form with pedigree*; but pedigree without good form and without quality we hold to be a mockery, a delusion, and a snare.

Having secured a good calf, or young animal of any kind, it almost entirely depends upon the owner whether it shall be a stunted or a full-sized animal. *No after treatment can ever compensate for bad management in the early stages of the animal's growth.* If at any time food be stinted and warmth be withheld, or if, as sometimes happens, warmth is given but light is withheld, or if warmth be secured only by impure ventilation, mischief is done, and a check to growth takes place which is never fully recovered from. Light and proper warmth are essential elements of health. Exclude a young growing animal from light, keep him warm by means only of the heated carbonic acid gas which he has thrown off from his lungs, and by the ammoniacal gases which emanate from his evacuations, and you will plant the seeds of "scouring," "black-leg," and those other mysterious complaints which carry off calves suddenly and hopelessly. You may produce scrofula ("king's evil"), rickets, or consumption in an animal, by excluding it from light, giving improper food, and surrounding the creature with an impure atmosphere. See how a flower in a darkened room creeps towards the light from some stray sunbeam. See how grass loses its green hue when artificially excluded from the light—and animals require it in like manner for the healthy performance of the functions of life. You may retard, and in some cases arrest, those higher changes which certain creatures have to pass through to their full development, by simply excluding them from light; tadpoles, for instance, have been kept for months as tadpoles, without reaching the higher development of the frog, by keeping them in darkness—and the young calves which are pent up in early Spring in dark and ill-ventilated places, are prevented from attaining that full health and perfect development which under happier circumstances would be reached. If required for the butcher, the diseased blood—the blood deprived by darkness and an improper atmosphere of much of its coloring matter and its fibrine—may cause the veal to be whiter, but if the animal be destined for a useful life, then let in upon him the glorious sunshine; let him breathe the pure, the life-giving oxygen of the skies; surround him with wholesome warmth; give him good food at regular intervals, and then, oh! then, in his sparkling eye, his smooth soft coat, his elastic skin, his rounded form, his frisking motions, he will testify his gratitude, and in his growth proclaim that he has a master who has had wisdom enough to comprehend, and kindness enough to supply the conditions upon which health, and strength, and beauty, and fertility can be obtained.

Break the Calves and Colts.

"Train up a child in the way he should go, and when he is old he will not depart from it," is just as applicable to the bovine and the equine tribes, as to the genus homo. The truth of the trite adage that "it is hard to learn old dogs new tricks," is not illustrated by the canine species alone. Not long ago we asked one who was driving a docile pair of oxen, how early he broke them to the yoke. "Why" said the youth, "they were always broken." That answer gives the whole gist of the matter. It is no trouble, but on the contrary, fun for the boys at least, to train up calves and colts just in the way they should go, by beginning the work before they are three months old.

We protest against putting any animals, human or other, to severe labor before maturity of muscle is attained; but kind treatment, constant handling, halter breaking, yoking, and driving, are advantageously practiced with colts and calves of the tenderest age. One who has not tried it will be surprised at the ease with which young animals may be taught to obey. We have had colts not six months old that would come at the call of their names, kneel at the bidding, lift a fore-foot to the hand to be shaken when bidden a "good morning," lay the head upon one's breast when asked if they loved their master, lead by the halter as readily as an old horse, and submit to the mock saddle, to beating the hoof as if shoeing them, and so of other manipulations. And these colts never knew what it was to be "broken."

We have seen calves driven about singly, and side by side, yoked and unyoked, made to change places, and sent away from the driver and called back again by simple word of mouth. We have also seen them get down upon their knees, lift up any desired foot, etc., with the utmost readiness. All this was accomplished by kind systematic treatment when growing up. A friend we were just conversing with, tells us of the fine sport he used to have on moonlight evenings when a boy, with a regular steer team made up of nearly all the calves in the neighborhood. Fifteen to twenty pairs were sometimes brought together, fitted with rude light yokes, and the whole attached to a light sled, and driven along in great glee. It was difficult to say whether the calves or the boys enjoyed the sport the most. Such a team was far from presenting a mean appearance. And these exhibitions were of three-fold benefit. The boys were not only kept from mischief, but were learning useful lessons, and no little skill was developed in constructing miniature yokes and other tackling. The calves were being trained for useful docile working oxen. And further, the ex-

tra currying and other care in feeding which each boy was likely to give his own animals when thus to be taken out into "company," was not wholly thrown away.

We have given these illustrations not to recommend such unusual training for general practice, but to indicate what may be done, and to impress the suggestions that a moderate degree of *early* training may be adopted by all, with decided advantage. How much better this course every way, than the usual method of allowing young animals to literally run wild until three or four years old, when they are headstrong, and require long, vigorous, and even hazardous coercion before they are thoroughly subdued.

Blinks from a Lantern.....XV.

BY DIOGENES REDIVIVUS.

THE KEY TO PROFITABLE FARMING.

In my researches, I often find this question put: "How shall the poor man make farming profitable?" It is easy enough to see how a man owning a large section of virgin soil, can transfer something of its fertility to his purse, and make money. If he have capital to work it, and a good market for wheat, he can make money rapidly by a few successive crops of this cereal. But this is not farming, strictly speaking, for nothing is done to husband the resources of the soil. It is simply an ignorant skimming of the soil,—a robbing of posterity—a work to which any vandal is adequate.

It is also easy to see how a man of capital, with a good farm, can keep up its fertility, and make money by the sale of a portion of its crops. But how the poor man with nothing but a poor farm and his hands, is to make a good farm, a good living, and at the same time save something for old age is not so readily perceived. It may reasonably be expected that my lantern should throw some light upon this subject.

It is of great service to the farmer, that he should cherish reasonable expectations of what he can accomplish in his business. The cultivation of the soil is unlike other occupations, in several respects. It does not afford the chances for sudden wealth which trade offers—or any speculative enterprise. But the *security* of its returns is a compensation for all other disadvantages. Labor, wisely directed, is more certain to be rewarded than in any other occupation; the farmer, then, should abandon the idea of sudden wealth. It is not among the probabilities of his position in life, and he should feel no disappointment when he labors years and finds that his bank stock is not increased, and his superfluous change is very small. If he have got a good living, and kept his farm improving in its productive capacity, without involving himself in debt, he ought to be satisfied.

It is not a reasonable expectation that a man can carry on a farm without some capital. This is required in other pursuits still more largely than in farming. If a man, therefore, have nothing but his hands to begin life with, he should be content to sell his labor to the highest bidder, until he have some capital to invest in the soil. In this way, he will all the while be increasing in skill, which is quite as available in this business, as either capital or labor. Too many, in their ignorance, set out in this business without counting the cost. They run in debt for the whole farm and stock, and enter upon a business requiring skill and labor, when they have nothing but labor to bestow. The amount of capital needed to begin with, depends much upon circumstances. Less of course is needed where land is cheap, than in the older States where it is dear. Much also depends upon the extent of the business with which one can content himself. The capital should be somewhat in proportion to the extent of the farm and the skill of the cultivator. A farmer of great experience, who knows just what to do with every dollar, can use a large capital to much better advantage than a beginner in the business.

A first principle in profitable farming is to cultivate only so many acres as you can make better. It may be your misfortune to own a large farm, and to be without any other capital. It is your ruin and the ruin of the land, to continue running over a large surface, and secure crops that barely pay the expenses of labor. It were good policy, in such a case, to sell half of the land to get capital to work the other half. If this cannot be done, seek to cultivate only so much as you can make remunerative. It is not improving land to plow it and take off a crop. It should have manure enough to raise seventy-five bushels of corn, sixty of oats, thirty of wheat, and three tons of hay to the acre, when it is laid down to grass. Crops less than these ought not to be considered *good* farming—that is, where the natural soil is not decidedly bad. Almost any of our exhausted soils, that now yield but twenty bushels of corn to the acre, or a ton of hay, require from fifty to seventy-five loads or half-cords of farm-yard manure to give them a start, and put them upon a course of improvement. If a farmer has only manure enough for one or two acres, let him attempt to cultivate no more. As to the rest of the farm, let it take care of itself, until you have the means of improving it.

Another principle in profitable farming is to keep only so much stock as you can keep in a thriving condition. The profit of an animal, reared for his flesh, ceases when he stops growing. He should be well fed until he reaches maturity, and then be slaughtered or sold. The porkers will pay as long as you can make them gain a pound or two a day. Lean squealing hogs are as unprofitable as they are disgraceful. Many farmers starve their sheep, so that they are unable to bring forth healthy lambs; starve their cows, so that they come out in the Spring looking more like skeletons than milkers. It takes a whole season of good pasturage to retrieve the ill treatment of the winter. Every animal kept upon the farm should have all the food he can digest, and as a rule, the more he digests the more profitable he will be, whether you take your pay in labor or flesh. And in this item let it be remembered that good quarters for your animals, warm dry stalls, stables, and styes, will save twenty-five per cent and upwards in fodder.

Another sound maxim is, treat your vegetables as well as your animals, keep them thriving until harvest. Use all the labor you need to cultivate your crops thoroughly, and to harvest them seasonably. Oftentimes, a large part of the profits of a farm go to make up the losses of deficient or unseasonable labor. Corn is planted two weeks too late, and the frost cuts off ten bushels in the acre. It is not hoed late enough, a crop of weeds takes possession, and another ten bushels are lost. Many a farmer with two hundred acres, tries to get along with a hired man and a boy, when he has business enough for six able bodied men. As a rule, labor upon the farm pays as well as capital, if it be skillfully directed. With many, the chief cause of unprofitable farming is deficient labor.

Then, most important of all, is the saving of manures. Their waste is the besetting sin of our husbandry. Not one farmer in a hundred makes the best use of his means for increasing the stock of his fertilizers. The majority waste more than half of these riches of the farm. "Study to have a large dunghill" was the exhortation of Cato two thousand years ago, and no sounder maxim was ever laid down in agriculture. If twenty-five cords of good farm-yard manure from each well fed ox or cow is an attainable result, every one can easily estimate the waste in his own practice. The liquid and solid droppings of all domestic animals are the farmer's silver and gold, and should be as carefully watched as the contents of his purse. Save all the vegetable wastes of the farm, bog hay, straw, leaves, weeds, small brush, peat and muck, and work them into the compost heap with the animal manures. He who observes these maxims, holds the key to profitable farming, and in enriching his acres will enrich himself.

How to use Rough Fodder.

Every farm produces a large supply of coarse material, the straw of the grains, the stalks and buts of corn, and the hay from swamps and marshes. These all contain more or less nourishment when well cured, and are available for food. It is a common practice in many parts of the country, to fodder them out from the stack-yard upon the frozen ground, where half starved cattle are constrained to eat them, or perish. This is the poorest use they can be put to. Better use the whole for bedding and manure, than make them the means of tormenting brutes, with the pangs of hunger.

All this coarse material should be kept under cover, and run through a hay cutter before it is fed out. It should then be mixed with Indian meal, or some concentrated food. The most of it will then be eaten, and while the coarser portions give *bulk* to the food, the finer parts and the meal will furnish *nourishment*—two essential qualities in the fodder of the ruminating animals. It will be better still, if the commingled mass can be steamed or boiled. This process softens the coarse, hard stalks and straw, and enables the animal to digest them more perfectly. The use of steamed food is increasing among those who have sufficient capital to carry on the business of farming. It enables one to work up all the rough fodder, and to pass it through the stomachs of thriving cattle. It gathers up the fragments so that nothing is lost.

If the steaming apparatus or a large boiling kettle, be not yet ready, and the meal is not to be had, it is a good plan to mix sliced roots with the coarse fodder cut up short. Turnips, beets, carrots, parsneps, and mangel wurtzels, are rapidly reduced to fine chips with a root cutter, and are highly relished by cattle. They ought to be used in connection with hay or straw. Animals will thrive much better upon this mixture, than upon either used separately.

In any one of these ways, rough fodder may be turned to good account, and all stabled animals be kept full fed from the close of the grazing season until Spring. This careful preservation of fodder will greatly increase the manure heap, and add to the riches of the farm. Stuff the animals, that they may stuff the soil.

A breeder of fowls says one of his shanghais when eating corn, takes one *peck* at a time.—*Ex.* That's nothing, Mr. Exchange; we have an old sow that, when eating swill, takes a *hogshead* full at a gulp.

Lean Calves make Mean Cattle.

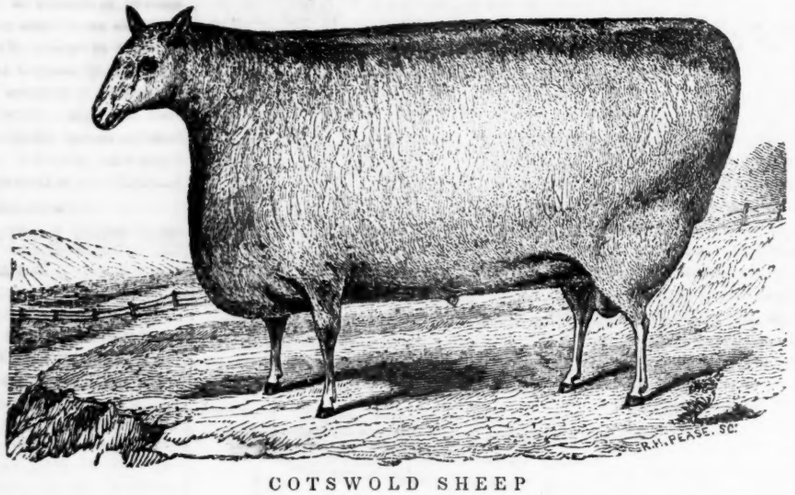
Calves and yearlings, at this season of the year, are often fed upon the coarsest fodder, and needlessly exposed to the weather. They are brought in late from the pasture, several weeks after they have ceased to thrive, and are kept upon poor fare, all through the Winter. The apology for this is, that the farm produces a certain amount of poor hay, which must be used up, and the young cattle eat it better than the older ones, and are therefore kept upon it. This is destructive of the best interests of the farmer, for it is all the while undermining the constitution of his stock, thus preventing their future thrifty growth.

It is highly important to remember that the constitution of a horse or cow is determined in the first three or four years of life. It is particularly liable to injury in the early stages of its growth, and if stunted there, it never attains a full development. The farmer lays the foundation of the future character of the animal at this early age, making the most of the good qualities it inherits from his parents, or aggravating the bad ones. He is as really a builder in the feeding of an animal, as the man who rears a house. The young animal wants good rich food, the best which the farm produces, particularly that which abounds in the raw material for making muscle and bone, that it may perfectly elaborate the osseous structure, and clothe it with flesh. If a farmer wants the best oxen, the best milkers, the fastest roadsters that can be made out of his stock, he must give them a fair chance in the first and second Winter.

It does not look reasonable that bog hay, and moldy, damaged corn stalks or hay, will make strong bones, or cover them well with muscle. Many a man has tried the experiment, and the result has been uniformly unsuccessful. The abused animals always come out in the Spring looking thin and cadaverous, every bristling hair and projecting bone uttering its remonstrance against the misguided owner. Even bulls that are to perpetuate the herd, are frequently kept in this half starved condition with the other young cattle, and are put to use before they are half grown. What can a man expect with such management of his stock, but miserable runts, that cumber rather than adorn his farm. Let the colts, calves, and yearlings have the best of hay, and the careful attention of the owner through the foddering season, if horses of good speed and bottom, good milkers, and strong oxen are wanted.—Bog hay should be held at a discount.

Look after the Breeding Animals.

The cows are dried off, and there is no more immediate profit from them. Some are so short sighted, as to stint their cows when they cease to give milk. They are often exposed to the weather at the stack yard, or if housed, are fed upon second rate fodder. This is miserable management, whether we look at the future profit from the cow or from her progeny. It should not be forgotten, that the cow at this season usually eats for more than one. Her value as a milker next Summer, depends upon her treatment during the Winter. She wants all the food she can digest, and good comfortable quarters. If she come out in good flesh, the fat pastures of June will be turned into milk and butter for the benefit of her owner. If she come out lean, it will take half the Summer to recover flesh, and to get into condition to give a full flow of milk. If the calf is to be raised for stock, it is still more important that the cow should be well fed. Its future good qualities will be very much affected by its fœtal life. Breeding sheep, swine, and all domestic animals, should have the owner's eye every day. Well fed dams will, ordinarily, produce strong, healthy offspring, repaying extra pains four-fold.



COTSWOLD SHEEP

What Kind of Sheep have You?

In taking our usual round through the New-York Live Stock markets, last week, we were led for the hundredth time, and more strongly than ever, to note the great difference between the various breeds of sheep on sale—or rather the difference between some blooded sheep, and others with very little blood in their bodies, and what there was of it of very poor quality. In one pen, heavy fat wethers were selling readily at an average of about $10 each—some of the best as high as $12—while in the very next pen was a lot which went slowly at $2. We could but wish the breeders of these latter animals present, to see the $8 extra so readily paid for the superior formed animals, while their own were in little demand even at the low price named. The poor and good were of about the same age, and the difference in the cost of raising them, was undoubtedly in favor of those selling for the most money. It is a noteworthy fact that sheep of common breeds and poor blood, with long legs, large heads, and slab sides, often consume, without taking on fat or flesh, as much food or even more, than the well bred and well formed animals, which always keep fat. The first cost of getting this improved stock is about the only extra expense, and then they are a constant source of profit as well as of pleasure.

These thoughts are peculiarly appropriate now, as this is the season of year to provide breeding bucks. If a farmer has only common stock, let him resolve that their progeny shall be of a better grade, by introducing a well formed blooded male, even if it be attended with considerable additional expense. The particular breed to be chosen must depend upon circumstances. If raised chiefly for wool, a mixture of the Merino is desirable; but if producing mutton for market is had in view, the Southdown, Leicestershire, or Cotswold, are preferable, as these furnish a larger carcass, fine tender meat, and take on fat readily.

We present herewith an engraving, a sort of model, though this one is somewhat disproportionate, perhaps, in the rump. Not long since we saw a fat sheep sold in this city for $100! which was in form very nearly like our engraving—not quite so deep in the breast, nor so level along the belly. Let farmers compare this with the stock in their yards, and see if there is not room for improvement in their breeds of sheep. They will find large hams and shoulders far more profitable, than long necks and overgrown heads and horns. If near good meat markets, seek an admixture at least, of Cotswold, if not the pure bred, of which we give a specimen. If a little remote from market, but yet so situated that there is any profit in selling or using mutton, adopt the Southdowns, which yield fair wool and excellent meat. If wool be the only object, then bring in the Merino blood.—And, we would ask here, why are not more sheep raised in this country? Wool of all grades seldom fails to command a high price; and when to the value of the fleece we add the good meat yielded, there is no doubt of the profitableness of sheep. No other animal is kept with less care, and they come early to productive maturity. At one year old, the lamb is ready for shearing, and for slaughter. The general testimony from most parts of the country is: "We can not keep sheep on account of the dogs." Is this so? Are our farmers sacrificing millions of dollars a year that they might derive from sheep-raising, on account of the existence of an excess of worthless dogs? We believe this to be the case. There is much to be said on this topic, and our pages will be open to the subject of sheep culture during this year.

Cattle's Tongues—Curry-combs.

The tongue of a cow or ox is suggestive. It is armed with a compact bed of spines, very rough to the touch, and adapted to a variety of uses. With this pliable member, it draws grass between the teeth for cropping, and all other articles of food when necessary. It comes in play in reaching up into the limbs of trees for foliage or fruit, or in reaching over walls and fences after forbidden crops. The tongue is also used in disturbing the hair and skin on all parts of the body within reach, and the inaccessible parts of the head are curried by mutual accomodation. No sight is more common in a herd of cattle, than this reciprocal toilet of the tongue. Here is nature's hint for the use of the card and curry-comb. These tools are especially called for in Winter, when cattle are kept in stalls, with their

heads confined, so that they can not use their tongues upon their own skin.

It is said by old hostlers, that a good currying, brushing, and rubbing down once a day, is equal to a feed of oats for a horse. However this may be, there can be no doubt that it greatly promotes the comfort and health of horses and cattle. It removes all filth from the skin, which is apt to accumulate in stables, unless currying is attended to daily. The skin is constantly throwing off effete matter, which collects around the roots of the hair, and stops up the pores, unless it is in some way removed. The tongue does this partially, but the card and curry-comb do it still better. This office is performed for the horse quite regularly, because he is more frequently exhibited in the presence of his owner, and the cleanliness of the carriage, and of the clothes of the family, depend somewhat upon the condition of the skin of the horse. But the ox, the cow, and the young animals, are sadly neglected. It is not unfrequently, that a yoke of oxen will come out of the stable in the Spring, with a thick plaster of filth upon their hams, the accumulation of a whole Winter—a disgrace to humanity, and to the good husbandry of the owner.

All these animals manifest their pleasure at the use of the card and curry-comb upon their skins, and after a little practice, the young stock will come as regularly for their carding, as for their food. It is an excellent method to tame heifers that are to bear their first calves in the Spring. They become accustomed to the handling of man, and submit to the first milking without much resistance. It is equally good for steers that are soon to be brought under the yoke. They become so gentle under gentle treatment, that they are easily broken to the yoke, and make a more tractable team, than by the ordinary process. The card is a much better persuader, than the ox whip. This is excellent business for the boys, and they should be taught to keep the card moving.

Home-made Corn Brooms.

[Though the improved brushes, brooms, carpet-sweepers, etc., made of hog's bristles, are coming into more frequent and general use, still the days of broom-corn are not yet numbered, and will not be for some time to come. Broom-corn is easily grown, and, in the newer portions of the country especially, it is a matter of economy to produce enough for home use. Though as a general rule the regular manufacturer can make brooms on a large scale cheaper than it can be done by individuals, yet the cost of transportation, and the two or three profits to be paid before they reach the consumer, and the necessity of saving every possible penny when one has to struggle hard to come out square at the end of the year, make it a matter of economy to get up brooms, as well as other domestic utensils, on the farm. Making brooms is not a very difficult operation when it is understood, and with a little instruction almost any one can do it. Not long since we heard a 'Buckeye farmer' remark: "When my daughters want a new broom they just go to the shop and make one." Our Maine Contributor has prepared a description of this process with some illustrations, which we take pleasure in presenting below. There may be better methods, but this corresponds nearly with what we helped practice many years ago, when a boy on a Western farm, "way out in the woods," and we think the hints here given may be useful to many persons.—Ed.]

Supposing the reader has learned from your previous articles just how to raise the broom-corn and gather it, I will omit all on that topic, further than to say that broom-corn is grown just like common maize or Indian corn, and requires similar soil and cultivation. The seed should be planted thicker to avoid failures, and many prefer to put it in drills. When the seed begins to harden, the upper joint is broken over to prevent the head from breaking off the stalk too short. Before hard frosts the heads with about a foot of stalk are cut off and laid on the barn floor, or on rails or poles under cover to dry thoroughly.

To clear off the seed and prepare the brush, a wooden comb may be made with a saw, on the end of a board, like fig. 1. The board may be nailed against a log or bench, or be cut short and secured in a work-bench vise, if one be at hand. Save the seed for horses or poultry, selecting first, enough good plump kernels for the next planting. Cut off the stems about six inches from the brush.

Fig. 1.

When ready to use, take as much as is needed, and set the stalk portions in water up to the brush, and leave to soak an hour or two. When softened, gather in the hands enough for a broom, with the largest and best stalks on the outside, in regular order. The good appearance of the perfected broom will depend upon the evenness of the brush and good arrangement of the outside layers. Next, fasten a strong small cord to the ceiling, with a loop for the foot in the lower end, or tie a stick in, upon which to place the foot. Wind this cord two or three times around the brush as shown in fig. 2. Grasp the brush firmly in both hands, and roll it round several times, increasing the pressure with the foot. [Instead of the foot we used a lever upon the lower end of the cord, one end placed under the work-bench, and the other held by a boy.—Ed.] The next operation is to wind on a strong twine for a space of 1½ or 2 inches. This is best done by rolling the pressing cord to the part next the brush, wind the twine on, and roll off the cord towards the end, following it with the twine. To make a neat knot at the end, double one end of the twine and lay it along the outside of the stalks as shown in fig. 3, letting the loose end lie out at the left. When the twine is all on, slip the right end through the loop, and draw the left end so as to bring the loop in under the coil of twine; then cut off the two ends close in to the coil. No knot will now be visible, as the lock is out of sight, and the ends are securely fastened.

Fig. 2.

Fig. 3.

If a flat broom is to be made, which is desirable, press the brush part between two narrow boards, (fig. 4,) fastened near together at one end with a piece of leather nailed on. The other end of the boards may be held together with a string. Instead of these boards the brush may be put between two short boards and screwed into a vise. The sewing is next in order. For this, use a large needle of iron or steel, or one of strong wood will do, (fig. 5,) eight to twelve inches in length. At the point where you wish to fasten the brush portion, say three or four inches below the winding thread, wind a twine once, or better twice around, and tie it firmly, leaving enough of one end to sew with. Now sew through and through, letting the thread pass around the winding as shown in fig. 6. Point the needle forward in making each stitch, so as to have it come out on the opposite side a little further along each time. A second sewing may then be made further towards the lower end. Three sewings are sometimes made. Two will generally be enough, except where the brush is very long.

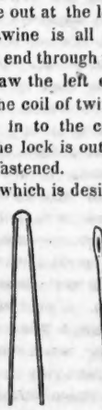


Fig. 4. Fig. 5.

Fig. 6.

Sharpen the lower end of the handle, and drive it in exactly in the center, and fasten it with two small nails upon opposite sides, and the broom is complete. The lower ends of the brush may need clipping a little to make them even. With a little practice a very neat broom may thus be made. They may be made still more tasteful, though not stronger nor more durable, by using wire instead of twine, and by paring down the stalks, so as to make a smaller, neater shank.

How Hemp is Grown and Prepared for Market....II.

Breaking.—This is considered the most laborious part of growing hemp, only the strongest hands being engaged in it. The most appropriate season is in February and March, in the clear bright days following frosty nights. The process is very much like that of breaking flax, and it requires a similar state of the atmosphere. Nothing can be done to advantage in damp wet weather. On the morning of a clear day, with the wind north-west, the hemp is set out on the south side of a fence, or where it may have the full benefit of the wind and sunshine. This work is usually performed in the open air, and sometimes the breakers have a fire, which assists in drying the hemp, while it keeps them warm.

The instrument in common use for this purpose is the old fashioned hand-brake, a little heavier and longer than the flax-brake of the Northern States. It is a rude contrivance, about two-and-a-half feet high, and six or seven in length. It consists of two jaws, furnished with two slats in the upper, and three in the lower, interlocking when they are shut. The upper is made movable, and in the process of breaking is raised up and down by means of a peg fastened in the head or block at the front end. The workman takes his stand by the side of the brake, grasps a handful of the hemp with his left hand, and with his right raises the upper jaw of his instrument, and by repeated strokes upon the hemp, breaks up the woody fibre, which falls off in shives, or little chips, until the lint is left nearly clean. He assists the cleaning process from time to time by striking the hemp across the brake, or across a stake put up for the purpose.

Scutching.—This process is called swingling in New-England, and those who have seen that work in the age of home-spun, which many of our readers remember, have a very good idea of the scutching board, and knife or scutch of the hemp districts. The board is fastened in a perpendicular position in a foot-block, and slightly hollowed at the top. The laborer takes a handful of hemp, after breaking, and putting it across the top of the board, strikes it with the scutching

knife, to disengage the shives. This is done until the lint is clean.

The usual day's work, or task, is 80 pounds, though much depends upon the state of the weather, and the character of the workman. Smart hands will frequently break twice this quantity in a day. The scutching is now generally done by the manufacturer. A day's work, as it comes from the brake, is done up in a bundle, and is then sent to market.

As may readily be inferred, this crop, with so many handlings—pulling, binding in bundles stacking, spreading for rotting, and gathering again, housing, breaking, and baling—comes to market in a great variety of conditions, very much affecting its value. It is almost impossible with the labor usually employed upon this crop, to produce an article of uniform excellence. Some is not rotted enough, some too much. Sometimes the breaking is not thoroughly done, and again it is imperfectly cleaned and carelessly handled. The price ranges from $3 to $8 the long cwt. (112 lbs). At the average price of five dollars, it pays rather better than tobacco or corn in localities distant from market.

EFFECT UPON THE SOIL.—Hemp exhausts the soil much less than many of the grain crops. The quantity of dressed lint from the acre varies from six hundred to a thousand pounds, according to the soil and the season. A dozen crops are sometimes taken from the same field, but this is bad husbandry. It is considered a cleansing crop, as it keeps down all weeds, and leaves the ground in fine condition for grain or grass. The pulling of the long roots disturbs the soil in much the same way as the cultivation of carrots and other tap roots, though not quite so deep.

THE HEMP MARKET—In our own country is quite large, ranking next after cotton among the textile crops. We import, some years, of hemp and its manufactures, to the amount of nearly ten millions of dollars. Besides this, we raise a crop, worth about five millions more, which is mainly consumed in this country. If our government steadily pursued the policy of encouraging the consumption of home products and manufactures, there would be an inviting field of labor in the increased production of this crop—as the statistics show that we produce only about one-third of what is annually consumed in the country. With the finest soil for this crop in the world, and abundant capital and labor, there seems to be no good reason why the country should send ten millions abroad to pay for this article.

Reports on Sorghum.

A correspondent of the Rural New-Yorker writes from Henry Co., Iowa: "I am quite satisfied that the new sugar cane is destined to be an institution in the Northwest, and that Iowa may be set down as one of the sugar growing states of the Union. There have been thousands of gallons of syrup made in this county, and next year the quantity will be multiplied many times. Sugar mills—wooden and iron—have been erected in every neighborhood of three or four farms, and have succeeded beyond expectation in making a very fair article of syrup. With all our imperfection of machinery and inexperience, 200 gallons per acre are considered by actual experiment but a moderate yield."

The Peoria (Ill.) Transcript states that within a circle of three miles in Peoria Co. 100 barrels of Sorghum syrup were manufactured by the farmers of that vicinity. A company has been formed, a five-roller mill erected, and one of Cook's evaporators (illustrated in the Dec. *Agriculturist*) purchased, which turns off 50 gallons of syrup per day—about the capacity of the mill. The juice is expressed for those who wish to do their own boiling, at two cents per gallon, or the syrup is returned to those furnishing the cane at eighteen cents per gallon. The mill and evaporator cost $200.

The Freeport (Ill.) Journal mentions a farmer in Stephenson county, who will have 100 barrels of Sorghum syrup to sell the present year.

The Davenport (Iowa) Gazette, in speaking of the manufactory in Henry Co., says: "The stalks are stripped of their leaves, and run through a two-roller mill, and the juice transferred to a shallow pan, with an evaporating surface of 40 square feet. The boiling is continued until five-sixths of the liquid has been evaporated, leaving the remaining one-sixth a Sorghum molasses of superior quality. Twenty-five gallons of syrup are turned off at one boiling, and four boilings can be made each day."

White Clover (*Trifolium repens.*).

This is a hardy plant, and it propagates itself wherever it has once become established on a favorite soil, since enough of its low growing heads escape the scythe and feeding of animals, to furnish seed for renewing the plants. It is too small to furnish meadow hay, but its densely matted, sweet, nutritious food, ever-growing and abundant, makes it most valuable for pasture; and its flowers yield the finest honey collected by bees. White clover is partial to clay lands where the surface has a fair supply of vegetable matter. It thrives best in the Northern and Middle States. We have heard little of it at the South. Have any of our readers in the uplands of Georgia, and in other southern regions had much experience with it?

Fence Stakes Fastened with Wire.

During the past season the writer has seen upon several farms in eastern New-York a method of securing stakes and rails upon the top of stone walls, which is much liked by those who have practiced it. The stone walls are first laid up, say three feet high, and then blocks of wood or stone, three or four inches thick, are laid across the top for the first or lower rails to rest upon, as seen at B, B. Stakes, *s*, are driven down in pairs close to the sides of the wall, slightly inclined inward. A stout iron wire is fastened on to each pair, by twisting the ends around the upper part of the stakes, about two feet from the top of the wall. The top rails are laid upon these wires, their ends lapping, as seen in the cut. The inclination of the stakes keeps the wire from slipping down, and the weight upon the wire draws the tops of the stakes together, enclosing the rails, so that they are not easily blown off, or thrown down by unruly cattle. The lower rails are kept in place also by the stakes. In the ordinary way, where the stakes are crossed over the top of the wall, and the rails lay in the fork thus made, there is a constant strain upon the bottom of the stakes, where they enter the ground, and in wet weather they are often thus *pried out*. By the method above described, the weight of the rails acts almost perpendicularly, thus holding the stakes firmly in place. The wire costs but a trifle, and is rapidly put on. It is cheaper and more convenient, more durable, and better than the wooden caps sometimes used. This is the testimony of a considerable number of farmers with whom we have conversed on the subject, who have had it in use several years.

Painting Buildings, etc.—Zinc Paint.

In reply to the queries of T. H. Wetherell, Jefferson County, New-York, and others, we answer, that, for surfaces exposed to the sun, October and November are the best months for painting such buildings and fences as are not located where they will be soiled by clouds of dust raised by the Autumn winds. December, January, or February, are quite as good months, if it can be done so as to harden somewhat before a storm. If not done in the above months, then the earlier in Spring the better. Paint put on late in Spring or in Summer, and exposed to the hot sun, is more liable to blister, as well as to lose some of its oil by evaporation, and it does not harden so firmly as if put on in Autumn or Winter.

For a white coat, the "Zinc paint" is preferable to "white lead," because the former is not browned by sulphuretted hydrogen or other gases in the atmosphere which act upon lead and darken it. On this account the zinc is especially valuable for cellars, kitchens, privies, barns, and other out-buildings, and in houses where hard coal is used, as they are more subject to sulphuretted hydrogen. But we prefer it for all white surfaces as being whiter and probably quite as durable. There is an impression that zinc costs more than lead paint, because the price per pound is greater; but this is a mistake. Zinc white is lighter and goes much further in giving color and body than the same weight of lead. Several experienced painters inform us that when painting a job contracted to be done with white lead, they freely allow the employer to change to zinc without extra charge, as they find it no more expensive, and requiring no more labor to put on an equally good coat and color of zinc than when lead is used. Some say, however, that they can get a better body by using lead for the first, or priming coat, and then taking zinc for the remaining coats. We are just experimenting with a mixture of white lead and zinc for a first coat, but shall finish off with pure zinc.

A Shiftless Farmer.

Just take a glimpse at him. He throws his manure out under the eaves of his barn, and lets it lie in sun and air, leaching away half of its strength into the neighboring streams. He neglects, also, to make use of many other useful matters which might go to increase the compost-heap—such as bones, ashes, chip-dirt, contents of privy, forest-leaves, droppings of hen-roosts, muck, etc., etc. Yet at the same time, he buys stable manure at the neighboring town, and carts it home at considerable expense.

He allows noxious weeds to overrun his land—white-daisy, snap-dragon, burdock, yellow-dock, quack grass, Canada thistles, and many other vile roots too numerous to mention. The time was, when most of these could have been exterminated by a little labor. When they first appeared in small numbers, a very little work with a weeding-hoe or dock-extractor would have headed

them off entirely. But now, having had full swing for several years, they laugh at the shiftless man's puny efforts and windy threats. But this is not the worst of the evil. The neighboring farmers are active, enterprising men, and have done their best to keep their land clear of foul roots, but the seeds blow over in clouds from the shiftless man's fields, and they are almost in despair. What can they do?

He keeps poor fences. When he sees a rail broken here, a board off there, or a post rotten and falling down beyond, he is very sorry, and hopes a good time will soon come for fence-mending; but he don't repair it at once. Bad becomes worse; hungry cattle leap the tottering fence, and down it all comes: wheat fields, and corn fields, and hay fields are trampled down; the farmer suffers loss, and, very likely he and his neighbors are soon having a delightful law-suit.

These are only a few broad lines of our portrait: the likeness will probably be detected without any further touches of the brush.

For the American Agriculturist.

Tim Bunker on giving Land a Start.

Mr. Editor.—"What are ye gwine to du with that are bag of Scotch Snuff!" asked Jake Frink, one morning as he looked at a lot of Peruvian No. 1, just landed at my barn door.

"Who has a better right to have a quilting than Mrs. Bunker, and to entertain the old ladies with a pinch of the Scotch dust!" I asked by way of rejoinder, and to stimulate Jake's curiosity, which was already wide awake.

"I thought snuff allers come in bladders" suggested Seth Twigs, as he blew out a column of smoke, that would have done credit to a locomotive.

"How du ye know but what it is a whale's bladder!" inquired Tucker, who had been to sea, and was anxious to show off his nautical knowledge, to Mr. Twiggs.

"That's guanner ye fools" remarked uncle Jotham Sparrowgrass, with a very emphatic blow of his cane upon the ground. "Haven't ye never seen any guanner? I've seen it a dozen year ago, over on the island—Judge Randall tried it time and agin.—Never could make much out of it. He got one or tu decent crops, and then the land fell off, worse than ever. The judge said it was a great humbug. Guess he's right."

"Ye aint a gwine to put that on tu the land, be ye Squire Bunker?" inquired Jake with an astonished look.

"I shouldn't wonder if I did."

This conversation with my neighbors, two years ago, shows the general impression about guano in any community, when it is first introduced. I had got it to try an experiment on some poor land, that lay off a couple of miles from my house. I suppose a man ought to apologize for owning land so far from home, for it is certainly very bad husbandry. The expense of cultivating it is nearly double that of a home lot, and manuring with stable dung at that distance is out of the question. The fact is, the land belongs to Mrs. Bunker, and, as it came from her father, she never felt like selling it. It has been used for pasture ever since I can remember. For the last ten years I have not been very particular about pasturing it, for there was not much grass there to be eaten. It was miserable old plain land, and had once been a light sandy loam, before the loam was carried off in crops. It bore five-fingers and moss pretty well, was fair for pennyroyal, and famous for mulleins and sweet fern. The sheep had worn little paths around among these brush, and if sheep have any virtue to restore exhausted land, that field never found it out. I suppose all the vegetable matter that grew upon an acre, if it could have been gathered, would not have weighed two hundred pounds. It used to be said of it, that it was too poor to bear worms and insects, so that skunks had to starve or emigrate.

We have a great deal of such land in all the old States, thoroughly worn out, and not paying the interest on three dollars an acre, to their present owners. They are generally farmers in moderate circumstances, and have no spare capital to give such land a start, and it lies idle and worthless. I thought it was worth trying to give this out-lot a chance to do a little better by itself, and its owner. My plan was to turn in green crops, a process in husbandry, that no body practices in this neighborhood. I had read of it in my *Agriculturist*, and thought it was just the thing for lots too far off from the barn to be manured from the stable. The trouble was to get the green crop to turn under.

I thought the guano would probably start rye, and with this I could make a beginning. I plowed up five acres two years ago in October, and put on five bags of guano, or about one hundred and fifty pounds to the acre. The rye came up well, and looked a remarkably dark green, and by the time snow fell, the ground was well covered with a thick mat of rye. That rye made a good deal of talk, and even on Sunday it used to be discussed between meetings, when folks ought to have been thinking on other matters. It passed the Winter well, got a good start in the Spring, and by the middle of May, the heads began to appear. It stood thick, and was thought to be one of the best looking pieces of rye in town. It went against the grain amazingly to turn it under, for according to the look, I should have had fifteen bushels to the acre.

About the middle of June, John and I went into it, with two teams, to plow it under; for I had made my plan, and was not to be turned aside by the talk of my neighbors. Tucker and Jones said it was a great shame to spoil such a field of grain, and even Mr. Spooner remarked, that making manure of bread stuff, did not seem to be very good economy. Now, you see, I did not care so much what George Washington Tucker and Benjamin Franklin Jones said, but I did not like to be undervalued by the minister. So said I to Mr. Spooner: "A thing always looks homely until it's finished; and you just wait till I get through with this field, before you make up your mind."

The rye was plowed under, and the ground turned up about two inches deeper than ever before. In about a fortnight I sowed buckwheat, harrowing it in with about the same quantity of guano, that I had used in the rye. The buckwheat came up and grew more rankly than any thing I ever saw before. All the neighbors were astonished at the monstrous growth, and most astonished when I brought out the teams, the last of August, to turn it under. They said Tim Bunker must be crazy to make manure of the heaviest crop of buckwheat in town. But the buckwheat went under notwithstanding. The last of September, I sowed with rye again, and as I had put two green crops under the sod, I thought the land had got start enough to take care of itself. I sowed with the rye, clover and herdsgrass seed, calculating that these would take the ground, when the rye came off. Last July I harvested from that five acre field, one hundred and twenty-five bushels of rye worth as many dollars. They have got to making paper out of the straw, so that I got ten dollars a tun for that or about seventy-five dollars.

Now, every man who is used to ciphering can tell whether the operation paid or not. The crop, I consider worth two hundred dollars, to say nothing of the fine catch of grass, which now promises, at least a tun and a half of hay to the acre. The cost of the manure was about forty-five dollars. The labor of plowing, sowing, harvesting, and the grass seed would, perhaps, swell the cost of the improvement to one hundred and fifty dollars. This leaves a handsome sum on the right side of the balance sheet, and the land in much better condition. The old plain would have been well sold at five dollars an acre, for it did not pay the interest on half that sum. I should not want to sell now at ten dollars an acre. The experiment has worked much better than I thought it would.

Now, I think we have here a hint as to the economical way of giving land a start. If it lies near the barn, where manure can be carted cheaply, the stable manure is the best renovator. If it lies at a distance it can be done with Peruvian No. 1, and green crops, and it is much better to do it with this than to have it lie idle. Mrs. Bunker is as much pleased with the result as any body for she says "it has always distressed her to have any thing belonging to the Bunker family lying idle." Yours to command,

Timothy Bunker, Esq.,

Hookertown, Dec. 10, 1859.

Nebraska Correspondence—Insects on Apple Trees.

To the Editor of the American Agriculturist:

Crops in Nebraska have been good, except potatoes, which were light. We had the first damaging frost about Sept. 20, but corn was mostly ripe. The probability is that we shall have food enough of our own production, which has not been the case previously since the settlement of this Territory....I send you enclosed some samples of flies with which my trees were covered in September, and wish to know whether they are the "borers"—at all events they bore holes an inch in depth in my trees, commencing generally in the forks at the intersection of small branches. I have taken from one small tree as many as forty of the nests enclosing worms. I also find upon the trees many of a species of spider. Whether they destroy the insects referred to, or are in pursuit of other prey, I can not tell. My trees are still thrifty, but I fear they will be killed by the boring operation.

Douglas Co., Nebraska. E. P. BREWSTER.

Remarks.—The flies sent, were too much crushed in the letter to be examined well. They appear to be what are called the "harvest flies," (*cicadas*) which are sometimes quite destructive to apple and other trees by boring into the branches. The real borer (*saperda bivittata*) lays its eggs upon the bark, usually near the root, and the worms hatched out, begin to bore inward almost as soon as hatched. We know of no means of destroying the cicada, as they are scattered through the entire branches, and any offensive wash or powder would be difficult of application. They are usually of short duration. Their most destructive enemies are flocks of birds.—Ed.]

A person passing through the country, observed the following notice on a board: "Horses taken in to grass. Long tails, three shillings and sixpence; short tails, two shillings." The owner of the land being asked the reason for the difference of the price, answered: "You see, the long tails can brush away the flies; but the short tails are so tormented by them, that they can hardly eat at all."

WINTER IN THE CITY—DRAWN BY FOSTER.

(Engraved for the American Agriculturist.)

A striking contrast to the "Winter Scene in the Country," given in the *Agriculturist* last month, is the above spirited engraving, which is presented not only on account of its intrinsic merit as a pleasing artistic sketch, but also as suggestive of the difference between city and country life. We have here the massive, costly brown stone and brick dwellings, imposing without, and luxurious within, possessing apparently all that can add to comfort or gratify taste. The imagination pictures the inmates as enjoying fashionable ease, with an abundance of servants in waiting to anticipate their wants; their table loaded with all the delicacies afforded by a city market; the drudgery of the kitchen, and the monotonous housework all performed by hired domestics, while the lordly owners have only to eat, drink, and be merry. The outside observer sees nothing of the care and anxiety, of the strain of mind, wear of conscience, the vexatious details of business "down town," undergone to keep up the show, or reality, of wealth and comfort "up town."

The bright side of the picture only is contemplated by the multitudes, who, impatient of the slow gains of agricultural industry, live in constant envy of their supposed more fortunate acquaintances acquiring sudden wealth in large towns. It is this false coloring thrown around city life, that allures multitudes of young men from the so-called humbler labors of the country, to enter the crowded struggle for the golden prizes promised by a mercantile or professional life. The attractions of fashion, and the supposed pleasure attending such a life, have captivated the heart of many a fair maiden, leading her to slight the attentions of her manly though rustic admirers for the more showy qualities of a city gallant.

But the darker shades of the reality are here also depicted. The crowd of tattered boys, their faces sharpened by poverty, are clamoring for the job of cleaning away the snow from before the rich man's door. With them, as with thousands of others in every city, this is a part of their battle for life. Upon the securing of some such chance job, depends their dinner and lodging. The snow-storm is to them a harvest, but even its scanty return is contended for by an eager crowd. Desolate homes, neglectful or cruel parents or guardians, cold, hunger, and wretchedness, are their portion. How they live, they only know, few others care to know. Misery is too common a sight in the city to attract more than passing attention. The assertion may be startling, but we believe it to be true, that of those who remove from the country, ten descend to absolute poverty for every one that acquires a competence, while not five in a hundred ever become rich. This crowd of boys jostling each other, is a fit representation of what is here going on continually in almost every calling. *One* will succeed, the rest must fail. There ought to be today an exodus from New-York of twenty thousand, or many more, who are suffering privations unknown to the humblest residents of the rural districts. When the bitterness of the winter storm makes farm duties unpleasant, and thoughts of "easy times" in the city are active, or when in castle building by the fireside there is presented the temptation of the elegant mansion and its surroundings, let the picture of the street-sweepers also tell its story and be heeded.

Store Fuel for Summer Now.

No labor pays better at this season, than cutting wood for the Summer fire. Every farmer should seek to have a year's stock of wood on hand It is a well ascertained fact that the dryer you can make wood the more heat you get from it, for warming the house. It uses up a certain portion of the fuel to drive off the moisture. Three cords of well seasoned fuel will go further than four cords of green. It is economy then of fuel, and of time, to keep a stock always on hand.

In the Winter when the swamps are frozen, many of the wood lots are accessible, that can not be approached in Summer. In the season of crops, it will be found exceedingly inconvenient to quit mowing or hoeing, to draw a load of green wood to the door. It will be likely to make scolding in-doors, and without. A good farmer is known by the aspect of his wood pile, and wood house. The latter should be stuffed to its utmost capacity, while the snow makes hauling easy, and the season of comparative leisure lasts

How about that Spring Seed?

Notwithstanding the fact that we think our neighbors a little better than can be found any where else, we now and then see some things even among them, worth telling of, just for illustration. Here is one, in which the actor was a Mr. ———, whom we will call James Careless (we don't mean you Mr. Smith, nor you Mr. Brown, nor you Mr. Johnson, nor you Mr. A, D, M, nor Mr. P, but the other man). Last Spring Mr. C. prepared a piece of good ground for oats, and when all was ready he went to the barn for the seed which had been put away in bin No. 3. On raising the lid there was only a quart or two of oats there. An investigation showed that his man Michael had fed them out early in the Winter to the horses, instead of those in bin No. 4, which were filled with thistle and other foul seeds, and were of inferior quality, weighing only 25 lbs. to the bushel. He hitched up a horse and drove to a dozen neighbors to try to buy some decent seed, but it was late, and none of them had a surplus. After losing half a day in fruitless search, he went back and sowed the poor oats in bin No. 4. The result was, a light yield of poor grain, eight or ten bushels less per acre than his neighbor's crop just over the fence, and worth in market five cents per bushel less.

Later in the Spring, neighbor C., got his corn land ready and went to bin No. 6, where the fall before he had stored five barrels of seed corn, selected at husking time. He found half of it gone—shelled out by Michael during the Winter, for a grist to the mill—and what remained was in part moldy, and a part had the chits eaten out by mice and rats. Failing again to get good seed from his neighbors, he picked out the ears the least moldy, and made up the balance from a poor lot of nubbins kept for grinding up with the cobs for horse feed. The result was that only about half of it came up, and after planting some of the ground twice and thrice over, he harvested about half a crop of unsound corn, part of it frost-bitten. His neighbor had a full yield of splendid corn on the same kind of ground, similarly manured, and treated every way like his own, except in the kind of seed planted.

Mr. C. intended to raise his own beet, carrot, parsnep, cabbage, and onion seed, but when he went to the cellar for the roots to plant out last April, Bridget had already, contrary to order it is true, cooked all the best specimens. He put out a few of such as were left, but they made a sorry appearance, and next Spring he must buy seed or plant that of inferior quality.

The above are facts we can vouch for, and not the worst ones we could tell. You, reader, have probably known similar instances. Of course *you* never had any such experience. But while you think of it, would it not be worth while to look over your oats, and your corn, and your barley, and your roots, and see if they are all right now; and then keep an eye upon them from this time onward? Overhaul those barrels or bins of corn now and then, and see if there is not in the bottom a nest containing half a dozen young rats or mice. Look out for Michael, that he does not show partiality for the horses and give them the best oats—all by mistake. See if a few of the best roots in the cellar are put away in a box of earth by themselves where Bridget can't get at them by mistake.

To say nothing of the profits, there's no pleasure in plowing and planting a field of corn, and nursing it all Summer, and then to get but half a crop, just for the lack of a little better seed. Well, now, not next week; to-day, not tomorrow, is just the time to look after the supply of seed you will want next Spring.

The Kitchen Garden.

A good garden for raising vegetables and small fruits, is one of the most important appendages to a house. Indeed, a house in the country is not a *home* without it. It greatly promotes the comfort and health of one's family. Well says quaint Dr. Deane, "I consider the kitchen garden of very considerable importance, as pot-herbs, salads, and roots of various kinds are useful in house-keeping. Having a plenty of them at hand, a family will not be so likely to run into the error which is too common in this country, of eating flesh in too great a proportion for health. Farmers as well as others, should have kitchen gardens; and they need not grudge the labor of tending them, which may be done at odd intervals of time, that would otherwise chance to be consumed in needless loitering."

The position of such a garden is a matter of considerable consequence. Probably the best aspect is a southern inclination; next to this a south-western, or south-eastern; and poorest of all a northern. It should, of course, be nigh the rear of the house, so as to be easy of access from the kitchen; and as our old author writes, "not far away, lest being too much out of sight, it should be out of mind, and the necessary culture of it too much neglected."

A garden should be well fenced. For protection against thieves, nothing is better than a good thorn hedge, the thorn-locust being the most formidable. But for shelter from cold north-west winds, a high board fence or wall is better. This protection is very important where one wishes to raise early vegetables and tender fruits. It breaks off severe blasts, and gives a warm and summery air to the garden quite early in the Spring. Some persons white-wash their fences or walls, supposing that this makes them warmer. It may cause them to reflect the sunlight more powerfully, but it also makes them part with their heat faster.

The selection of a suitable soil is also a matter of great importance. By all means, avoid a low, wet piece of ground; for though the brightest sun may shine upon it, and though you may heap the richest manures upon its surface, it will yet be unsuitable for a garden. Draining may help it, but can scarcely make it as warm and generous as one that is naturally dry. A light, mellow, turfy loam, neither very sandy, nor yet of a stiff clayey texture, is the quality most to be desired. It should be said, however, that skillful cultivation can modify an unfavorable soil much, making it lighter or heavier as it may need.

To prepare the ground for planting, it should be sub-soiled or trenched. If trenched, let it not be done in the thoughtless way sometimes practiced of throwing up the bottom earth, and burying the rich surface soil beneath it. In old and over-cropped gardens, it may answer to bring up a little of the lower soil annually, but as a general rule, it should be left at the bottom. The right way of trenching is this: Begin on one side of your patch by digging a trench two feet wide and one spade deep, carrying off the dirt to the further side of the patch. Then go through this trench again, simply breaking up the subsoil to the depth of the spade, *but not throwing it out.* Now, fill up this trench with the good surface soil taken from the next portion to be trenched, then dig the bottom of the second trench and go on as before. When the whole plot is trenched over in this way, the soil taken off from the first trench will fill up the last, and the work is then done. If the soil is poor, a coat of manure should be worked in as the trenching proceeds. If it is stiff and cold, give it a dressing of old leaves, sand, lime, or peat, or anything calculated to render it porous and friable. If too light, add a coating of ashes, clay, etc., to be thoroughly mixed with it.

The shape of a garden is not a matter of great importance, though the nearer it approaches to a square or parallelogram, the better. The internal arrangement is of more consequence. The quite common plan in most good gardens, is substantially this: Lay off a border from four to six feet wide, all around the outer side of the plot. Devote this principally to vines and low shrubs. On the north side plant grapes, that they may have the full benefit of the sun. On the west set raspberries and blackberries. On the east put quinces and a few dwarf pears. On the south set currants and gooseberries of the various kinds which being of low growth will not materially shade the garden. A walk in front of this whole border may be from two to five feet wide, according to the size of the garden. So too, if space permit, a walk may be laid off through the middle of the garden, with a border on each side for dwarf pears or other small fruits. Grapes trained to poles may occupy a part of this border, if they are so managed as not to shade the other portions of the garden. If, for example, this middle walk runs east and west, the south border might contain grapes, because they would cast their shadow only across the walk; but the north border should not.

The remainder of the space may be laid off in squares for melons, squashes, cucumbers, cabbages, peas, and the like; or into beds for beets, onions, and other vegetables.

Tomatoes in Pots.

A correspondent of the Gardeners' Chronicle (Eng.), strongly recommends the growing of tomatoes wholly in pots, especially by those who raise only a limited supply of a dozen or two plants for home use. He also thinks market gardeners, and those living in cities would find this mode valuable. The pot plants are entirely under control, and require almost no attention. He says: I have not planted out tomatoes for the last five years, but have had instead good crops from plants in pots, with no trouble in training, or stopping, and no failure as to production or ripening. I sow the seed in a No. 60 pot at the end of February. The plants are kept starving under glass till the middle of April, then shifted into thumbs, and put on the potting bench for a week. They are then packed together under a warm fence, and when they want it are shifted into 60's and allowed to get quite pot-bound. Another shift into 6-inch pots starts them into bloom at less than a foot high, and their further growth entirely depends on their amount of root-room. If left alone and allowed to root through their pots, they swell the fruit well and make no more growth, and every plant bears from half-a-dozen to nine good fruit which are ripe by the end of September. To swell them off, give liquid manure once a week and allow no succession of blooms. Any that are not quite ripe when sun heat begins to fail may be put under glass for a week; or if of good size, cut off the fruit with a good length of stem and hang them in a warm room and they soon ripen.

Remark.—The above plan may frequently be practiced here, but is better adapted to England as a general thing. In most places here we have

dryer atmosphere and more sunshine to mature the fruit in the open ground. American cultivators would hardly be satisfied with a yield of only six to nine fruit on a single plant.

Notes upon Garden Beans.

We planted May 7th several rows of three kinds of early beans, side by side. They were put thickly in drills, and thinned out from time to time, as they became too crowded in the rows. Manured in the hill with bone saw-dust. The following notes were made.

Early Mohawk Dwarf Beans.—Ready to cook July 4th; a large yield of pods, with little string, and very good. Continued bearing several days.

Early Valentine Dwarf Beans.—Ready to cook July 9th. Yielded well. Pods long and nearly round, with no string. Quality good.

Early China Dwarf Beans.—Ready to cook July 11th. Yielded well. Little string on the pods; very tender, and cooking quality good.

Early Snap Dwarf Beans.—Ready to cook July 15th. From some unknown cause the pods had frequent black spots upon them. But for these spots they were quite as good as the Early China, both in yield and quality.

Lima Beans.—These were very successful. They were planted thickly on the tops of ridges, as early as May 4th; came up quickly; were thinned out as needed, and trained up on twine fastened upon a frame, 8 feet high, as described on page 166 of last volume (June No.) We began to cook them July 20, and the two rows, each 25 feet long, furnished an abundant supply for family use, for drying green, and near two bushels of unshelled ripe pods. The vines were kept shortened in at the top of the frames. We can strongly recommend the mode of culture, which was described, as above referred to.

Notes upon Garden Peas.

The following notes are taken from our garden memorandum book. The soil is a fair loam, not very rich, and during the last season—our first of cultivating it—no manure was added, except a little fine bone dust (bone saw-dust), intimately mixed with four times its bulk of dry loam, and put into the drill with the seed.

Daniel O'Rourke Pea.—Sown May 5th. First mess picked June 20th. Averaged about 2½ feet high; yielded well. Kernel small, of fair cooking quality. Chiefly valuable for its very early maturity. Crop ripe and gathered, and ground resown July 5th. Second crop fair.

Champion of England Pea.—Sown May 5th. Cooked first, July 15th. Averaged 5 feet high; well podded, and well filled. Kernel large, and quality very good. One of the best peas for a general garden crop.

Napoleon Pea (new).—Planted May 5th. First cooked July 16th. Averaged 3½ feet high; well podded; averaged 4 peas in the pod, of large size; quality very good. Not quite so productive as the Champion of England, but more convenient for bushing.

Eugenie Pea, (new).—Planted May 5th. Cooked first on July 19th. Averaged 3½ feet high; well podded; 3 and 4 peas in a pod, sometimes 5, but not quite averaging 4. Quality very good. The peas were of large size; cracked open somewhat in the pod.

Champion of Scotland Pea, (new).—Planted May 5th. Cooked first on July 23d. Averaged 6 feet high. Not very full of pods when picking commenced, but had many blossoms which yielded afterwards. Kernel large, and of good flavor. A good garden pea, but the hight of the vines (haulm) an objection.

"*Strawberry Pea.*"—Under this name we received a package of small peas last Spring. Planted May 8th. Ripe and pulled July 8th, and second crop planted and gathered. Averaged only about 6 inches high, very full of pods. They are only of moderately good quality. May be planted thickly in drills only 12 to 15 inches apart, and of course require no brush. We think they will yield quite as much, on the same space, as the larger kinds, and may perhaps prove valuable an account of their early maturity, and requiring no bushing. We have before seen peas called by the same name, but these appeared to be superior, both in yield and quality—due perhaps to the soil and season. We shall try them further.

Killing Strawberries with Kindness.

To the Editor of the American Agriculturist:

I little expected to find anything in mid-winter in your paper to assist me with my little farm of "four acres," but you have saved my choice strawberry bed: I was "killing them with kindness." Wishing to do something extra for them, and sawdust being the most accessible, I spread it on liberally. Had I covered them with dry sawdust the case would not have been so bad. A portion had been spread under the horses as litter and to soak up the liquids, and thinking this more valuable on that account I literally buried the plants with it, and should have left them so, but for your timely warning in the December *Agriculturist.* After reading about the danger of smothering the plants, I examined my bed, and found a portion of them already as black as my hat. A timely removal of the heated mulch will probably save them. On that portion of the bed where dry dust was used, the plants are all right.

S. E. GRUMAN.

Fairfield Co., Conn.

"Grafts" (cions) may be cut Now.

Cions or grafts of apple and other fruit trees may be cut at any time after the fall of the leaf in Autumn, until they are wanted for use in the Spring. In practice, it is found that early cut grafts do better than those taken off at the grafting season. We advise those who have trees to graft in the Spring to secure their cions now.

On any mild day when the twigs are not frozen, cut off only the last season's growth. Be careful to select from trees of *known* varieties. Much confusion and disappointment, not to say vexation, has resulted from mistakes in cutting grafts, which, after three years' nursing, have turned out to be common fruit. Not only should great care be exercised in selecting the right kinds, but they should be kept separate and plainly marked as soon as cut. Arrange the buts evenly, and tie in handful bunches, using two stout strings, one near each end. Write the name plainly upon a good label and attach it with wire to each bundle. Set these upon end in a wooden box in the cellar, and sift in moist sand, or cover with damp moss. They will keep very well when buried in a dry soil in the garden, but it is important that no water stand upon the ground. When thus buried, either in the cellar or in open ground, it is better to previously wrap the bundles in old newspapers to keep them clean and free from grit, so that the knife will not be dulled in fitting them for setting.

Grafts can be sent long distances by mail or express when properly prepared and packed. They are best secured by coating the cut ends with sealing wax, grafting cement, or gum shellac dissolved in alcohol, and wrapping them in oiled silk. The only requisite is to keep the sap or moisture they now contain from evaporating. When grafts are received in a shriveled condition, bury them at once in earth and they will frequently recover their plumpness and be suitable for use. They should not be put into water as has sometimes been recommended.

What Varieties of Apples to Plant.

Mr. A. Skein, of Montgomery Co., Pa., alluding to our November article where it was advised to plant only a few varieties of apples, asks what sorts, and where we would buy them. We could reply better if we knew whether the fruit was for market or for home use. If for market, Winter fruit would be desirable. The Baldwin and R. I. Greening are generally good, while in almost every locality there are one or two sorts which succeed better than others, and for which a market is easily found. We can not advise you where to buy. There should be in your vicinity one or more good, *reliable* nurserymen. We buy of our neighbors, Parsons & Co., because we know them to be entirely trustworthy, and it is convenient to get them there. The cards of other good nurserymen will be found in our advertising columns at the appropriate season.

Barren Grape Vines.

The inquiry is often made, why certain grape-vines bear no fruit. They make a great show of blossoms at the proper time, but bring forth no grapes. We are asked whether some new style of pruning or training, some appropriate manure, or other treatment, will not bring such vines into a bearing state. To all of which we briefly reply:

If the vines in question blossom and *set their fruit,* but fail to perfect and ripen it, the trouble is, probably, in an unwholesome soil, bad position, or overcrowded branches, etc.

But if they flower and do *not* set their fruit, (i. e. if the fruit does not form at all,) the defect is in the blossoms, and it is a radical defect. They have not both stamens and pistils, and therefore cannot of themselves form fruit. It is just so with many kinds of strawberries. If the barren grape-vines are lacking only in stamens, they can be fertilized by bringing the pollen by hand from other fruitful vines, and applying it to the pistils. But if they have stamens and not pistils, the case is beyond remedy. The vines should be plucked up at once, to make room for others of a perfect organization, or they should be grafted in the root.

Origin of the Delaware Grape.

To the Editor of the American Agriculturist

In your article about the Delaware Grape in the last No. of the *Agriculturist* you say, "we can not tell the history of its origin and no one can, with any certainty." Now, I think I can. Living in the vicinity of Frenchtown, I have had a good opportunity of learning its history. We have two kinds of grapes growing in our section of the country that resemble each other very much. I have two large vines growing in my garden, which are poor bearers, and which I always thought were the true Delawares. I did not find out my mistake until this Fall. I have since felt a great interest in learning the history of the Delaware Grape, and have visited a great number of old vines, some between thirty and fifty years old. In every instance I could trace them back no further than to Mr. Prevost's at Frenchtown, N. J. Mr. Prevost was a French gentleman of wealth, and came to this country some seventy years ago. He owned an estate of about 600 acres, with all of Frenchtown. He not only cultivated the vine but also some of the most de-

licious pears; some of the old trees are standing yet, but the railroad has destroyed many of them. I think we might as well call them native too. The Prevost family that I conversed with, could not tell to a certainty about the grape, but were certain that it was not a native grape. I was speaking the other day with the widow of the late Dr. Holcomb, living in the neighborhood of Frenchtown. Mr. Holcomb and Mr. Prevost were intimate friends. Mr. Prevost told them that he got it from Burgundi. Mrs. Holcomb has two large vines growing in her garden; she told me that she often had to laugh at her husband as they walked in their garden trying to pronounce Burgundi, as Mr. Prevost did. The Delaware I think is as hardy as any grape we have. In some neighborhoods it does not mildew any, in others but very little. Our Germans say it is the best grape they have ever eaten in America. The best vines I visited were grafted on wild vines.

Bucks Co., Pa. CHARLES B. OTT.

Mr. David Conyngham, of Lancaster County, Pa., writes on the same subject, that he has just been informed by Mrs. A. K. Witmer, that Mr. Prevost brought the first Delaware Grape vine to this country, and planted it on the farm now owned by her father, Mr. Steele, in Chester Co., Pa. This does not correspond with Mr. Ott's account, unless it be shown that Mr. Prevost lived in Chester Co., Pa., previous to going to Frenchtown, N. J. These statements do not furnish sufficient ground for retracting our remarks last month, to wit: "We can not tell the history of its origin, and no one can with any assurance of certainty."

A few Hints for the Garden in Winter.

1. Did you, last Fall, throw up hillocks of dirt around your fruit and ornamental trees liable to be girdled by the mice? If not, then do now the next best thing, viz.: go out frequently during the Winter and trample down the snow solid around every tree, and throw up more of the same around the bole. This will make it hard work for the varmints to get at the green bark.

2. Did you, last Fall, protect some of your tender trees, shrubs and plants, by matting or evergreen branches? It would be strange if some of these coverings had not got loose, by this time. Take a tour through the lawn and garden and see how they get on. A few minutes' work with a few strings to tie up loose things, will save you much disappointment and loss.

3. Perhaps the damp snow has lodged upon the boughs of some of your finest trees, evergreens in particular, and is likely to break them off. Go, this very day, and shake off the snow, and perhaps tie up the straggling branches to prevent injury in future. A stitch in time, etc.

Sports among Flowers.

Double flowers, as nearly everybody knows, are sports, that is, variations from the original type, which is single. A wild rose, (which is always single,) if taken from the woods and planted in a garden and highly manured, will often become double. The stamens seem to be hurried and forced out of their natural development, and turned into petals. To the eye of a botanist, such flowers are monstrosities.

We have seen a rose-bush which is famous for its sports. It is a white, everblooming rose, and is almost always in flower. Sometimes the petals of a bud will be streaked with red, then mottled and flecked with crimson. Sometimes a single petal will be crimson, while all the rest are white. And, strangest of all, occasionally, one blossom will be entirely crimson, while the others are white, or delicately striped. These sports occur most frequently late in the summer, on the approach of frosty nights. It would seem as if the plant were a cross between a white and crimson rose, possessing most of the nature of the white parent, but occasionally developing a little of the blood of the crimson parent. The like of this is often seen in human families. We ought to add that this rose-bush is set in deep, rich soil, and is often treated with rotten leaves and chip-dirt.

What is its Name?

Miss Lucy A. Watson, of Orange Co., Vt., sends two leaves, and a pencil sketch, of which the above is an engraving. She writes: "I found this little plant at Thetford Slate Quarry, near the Connecticut river. I have never seen one in blossom, and so can not ascertain the name, which I should like to know. In November I found one specimen with the scape about four inches high, bearing little round pods like lobelia, but the seeds were gone. The plant had turned yellow, so I inferred that it was a biennial."—The plant we have frequently seen, but do not at this moment recall its name. The pencil sketch sent, appears very life-like; we shall be obliged to Miss Watson for pencilings of other plants in their season.—ED.

Castor Oil Plant Ornamental.

No plant in our garden the past season presented a more pleasing, showy appearance than the PALMA-CHRISTI (*Ricinus communis*), commonly called the castor oil plant, because its seeds, which resemble small mottled beans in form and color, when pressed yield the common castor oil, so abundantly used as a cathartic medicine. May 7th, some seeds furnished by a subscriber, were planted thickly in a drill twenty feet long. The weaker plants were gradually thinned out until only fifteen were left. These grew rapidly and by the middle of August were seven to ten feet in hight, and in bloom. The leaves growing alternately upon long stems were nearly circular, and many of them measured over two feet in diameter. The round hollow stalks were 1½ to 2 inches in diameter, smooth and covered with a rich bloom. The leaves cast a broad shade. The plant gives one a fine conception of the tropical palms, and taken altogether, we consider it highly ornamental in any garden.

This plant is interesting in another way: commentators are pretty generally agreed, we believe, that it is the veritable "Jonah's Gourd," referred to in the Bible. The original word, *kikayon*, translated "gourd" is believed to refer to the *Palma-Christi*. Its rapid growth, and heavy shading foliage favor the idea; and that it withers quickly, we had a good illustration of. Wishing to exhibit a plant to a Sabbath school in connection with some remarks upon the history of Jonah, we cut one when just starting from home, but before we could get to the school room, say in fifteen minutes, the leaves were completely wilted down.

In some parts of the country the castor oil plant is raised largely for manufacturing oil from the seeds or beans; but very many persons have never seen it. To give such an opportunity to become acquainted with it by raising a few plants we have placed it in our Seed Distribution (No. 111). It will grow to considerable size in any of the northern States we believe, though it will not mature seeds at the extreme north. Its size will depend upon the warmth, dryness and richness of the soil, and upon the season, as in some places it is a mere dwarf but a few feet high, while in tropical climates it shoots upward twenty to thirty feet, or more. A brief chapter on its culture for profit, from some experienced grower in Southern Illinois, Missouri, Kentucky, or Virginia, would doubtless be interesting.

A Spurious Scotch Pine.

Every planter knows that one of the most commonly planted evergreens, is the Scotch pine, or Scotch *fir*, as it is often incorrectly styled. It is a noble tree, of rapid growth, perfectly hardy, and of fine tint. Yet it seems there is a spurious sort in market, and purchasers must be on their guard.

The late Sir Walter Scott, an enthusiastic planter and a skillful writer about trees, speaks of this spurious variety and cautions his friends against it. On reading his lines, we at first thought he might be running a comparison between the European Silver Fir (*Picea pectinata*), and the American Balsam Fir (*Picea balsamea*), but a careful reading showed that he was speaking of *pines* and not *firs*. His description of the interloper is so clear, that we copy it from the Foreign Quarterly Review:

"We may remind the young planter, that the species of fir which in an evil hour was called *Scotch*, as now generally found in nurseries, is inferior in every respect to the real Highland fir, which may be found in the north of Scotland, in immense natural forests equally distinguished for their romantic beauty and national importance. This last is a noble tree, growing with huge, contorted arms, not altogether unlike the oak, and forming therein a strong contrast to the formality of the common fir. The wood, which is of a red color, is equal to that brought from Norway; and when a plant, it may be known from the spurious or common fir, by the tufts of leaves being shorter and thicker, and by the color being considerably darker. The appearance of the Highland fir, when planted in its appropriate situation amongst rocks and crags, is dignified and even magnificent; the dusky red of its massive arms and the dark hue of its leaves forming a happy accompaniment to scenes of this description.

The ordinary fir is an inferior variety, brought from Canada half a century ago. Being very prolific, the nursery-gardeners found it easy to raise it in immense quantities; and thus, though a mean looking tree, and producing wood of little comparative value, it has superseded the natural plant of the country, and it is called, *par excellence*, the Scotch fir.

There is a great difference betwixt the wood even of this baser species, raised slowly and in exposed situations, and that of the same tree produced upon richer soil—the last being much inferior in every respect, because more rapid in growth."

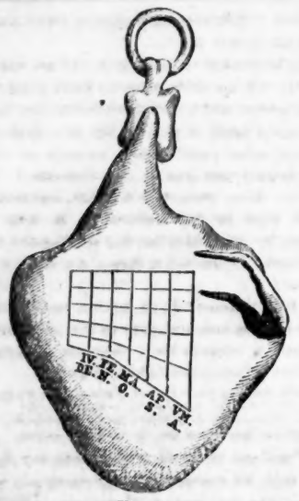


Fig. 1.

Rural Embellishments.

SUN DIALS.

[The following article was designed for two papers, but it should all go together, and we leave out some other good things to make room for it here. It has cost a good deal of investigation and labor, and is the first, and indeed the only complete article that has appeared on the subject—at least in this country. The introductory portions are rather historical, but the casual reader even, will be much interested in the latter part, if not in the whole.]

Last month under the head of "Rural Embellishments," we discoursed at some length, of terraces and vases. We now propose to pursue the general subject, speaking particularly of sun-dials.

The practice has long prevailed, and does still, to some extent, of setting statuary or sculptured figures of men and women, (generally symbolical,) on pedestals in different parts of the pleasure-ground. There is a pleasing significance in the usage, to which we are not insensible. They highten the expression of the place where they stand, and give it an air of classical elegance and finish. But it admits of a question whether the naked or nearly nude figures, copied often from statues of Southern Europe, are exactly appropriate to our climate and our state of society.

"All heathen goddesses most rare,
Homer, Plutarch, and Nebuchadnezzar,
All standing naked in the open air,"

doubtless looked well enough on the balmy shores of the Mediterranean; but in our hyperborean regions they suggest the idea of discomfort, and make one feel sympathy for the poor things, who ought to have more clothes on, especially in cold, stormy nights! The exhibition of such fig-leaved characters may have answered well enough in the social state of classical times, and of Southern Europe since; but in our country, and in our present condition of society, we doubt whether the moral influence would be beneficial. At least, the taste is questionable. Instead of Hebes and Venuses "wooing us from the tops of marble columns," why not introduce some fanciful rural objects, or some artistic embodiment of the pleasant ideas which the country and the garden always suggest?

And among these, we would mention the *Sun-Dial*, as being both useful and ornamental. Says Downing: "Sun-Dials are among the oldest decorations for the garden and grounds, and there are scarcely any which we think more suitable. They are not merely decorative, but have also a useful character. When we meet daily in our walks for a number of years, with one of these silent monitors of the flight of time, we become in a degree attached to it, and really look on it as gifted with a species of intelligence, beaming out when the sunbeams smile on its dial-plate."

The Egyptians or Babylonians (we can not determine which,) first devised this instrument. The Hebrews also used it at an early day. In the 20th chapter of Second Kings, mention is made of the dial of Ahaz, 713 years before the Christian era. It will be remembered that in those ages they had no magnetic needle to mark the north or south, and no clocks or other time pieces to mark the hours. The Egyptians were the first to determine accurately the position of the meridian (noon line), and to divide the day into twenty-four equal parts. They placed their pyramids in the direction of the cardinal points. It was not long after this, that the Greeks began to cultivate the sciences of geometry and astronomy; then they outstripped all other nations in minute and accurate divisions of time. About 600 years before Christ, Anaximander erected a *gnomon* or pyramid, which showed the time of noon, either by its shortest shadow, or by the shadow falling on a meridian line. He was instructed in the art by Thales, who studied in Egypt. One ancient historian records that the Greeks learned the art of dialing also from the Babylonians.

The Romans were very slow to adopt any scientific method for dividing time. As late as the fifth century after the building of their city (300 years before Christ), the only periods of the day noted were the *sunrise*, *sunset*, and *noon*, which last was proclaimed aloud by a herald from a certain high point of the city. One account states that the first dial known in Rome, was placed near the temple of Quirinus, about the year of the city 460 (292 years before Christ). Another writer doubts this, and puts the date 30 years later, during the first Punic war, and says that the dial was brought home as a trophy of battle, from Catania, Sicily. It was not a perfect time-keeper, because there were four degrees difference in latitude between Rome and Catania for which it was constructed. But they managed to use it ninety-nine years, when the consul Martius Phillipus caused another and more accurate one to be made. Doubtless some sharp-witted Greek constructed it, for Roman conquests had now begun to bring many of those acute and learned people to the imperial city. But how should they contrive to determine the hour by night, and in cloudy weather? It took a century of study and experiment to answer this. And here, again, Greek wit availed to invent the *Clepsydra*, which was an instrument for measuring time by the dropping of water, and not unlike the modern hour-glass. They were used in public and private houses, slaves being stationed near, to watch and announce the time as indicated by them.

Fig. 2.

Ancient literature contains frequent allusions to Sun-Dials. The Grecian poet Menander introduces into one of his pieces a hungry parasite sitting by a dial and watching the arrival of the hour of his usual meal, "but in his eagerness, he had begun so early as to mistake the light of the moon for that of the sun." Some writer relates that a Sun-Dial having been shown to Epicurus (the father of high-livers) he exclaimed: "What a fine invention to prevent one forgetting the hour of dinner!" A jolly Greek once engraved an inscription on his dial-plate, to this effect: "Six hours of the day are given for labor; the remaining four say to mortals, *Live*." These four hours are marked on the dial with certain letters which taken together from the word "Live."

In a fragment of a comedy of Plautus, an epicure is represented as exclaiming against sun-dials in these terms: "May the gods confound the fellow who first invented hours, and placed the dial here, which doles out the day piecemeal to me, an unhappy wretch! For when I was a boy, my belly was my dial, and it was by far the best, and truest of them all: I ate whenever it warned me,—that is, if anything could be had—but now, whatever there may be, it is nothing, unless, forsooth, it pleaseth the sun. Indeed, since the town is filled with dials, the greater part of the people crawl about starving with hunger!...."—The best accounts we have seen of ancient sun-dials, assert that Berosus, the Chaldean, invented the dial called the *Hunicycle*; Aristarchus of Samos, the *Scaphe*; Dionysidorus the *Cone-Dial*; Scopas the *Plinthium*; and others contrived other sorts with such crooked names that we can not undertake to write them. The Greeks had also portable dials which they used in traveling. The dial of Aristarchus was probably the simplest of all. "It was a hemisphere cut in a cubic block of stone, having its base horizontal. At the bottom of the cavity, a style (rod, or pointer) was erected, the top of which was at the center of the sphere. It is easy to see that the summit of the style would during every day describe an arc of a circle. Several antique instruments (dials) of this kind have been found: the first in 1741, in the ruins of an ancient Roman house at Tusculum, which appears to have belonged to Cicero. It was placed in the museum of the Roman College in 1746, and is considered very valuable on account of its antiquity and its having belonged to the great Roman orator." Several other dials of similar pattern have been found in the neighborhood of Rome and among the ruins of Pompeii. Ancient monuments also reveal to us the forms of numerous dials. One at Ravenna (Italy) has the figure of a hemisphere supported on the shoulders of a Hercules; another stands on a simple column. Another curious dial, (see fig. 1,) a portable one, was dug out of the ruins of Portici, in 1755. Its shape is that of a bacon-ham, and it is suspended by a ring fastened to the leg. The end of the tail answers for the *style*, or *gnomon*, and the hours are marked on that part of the ham which is nearest a plane surface.

Fig. 3.

Fig. 4.

It appears that the Arabians understood, quite early, the science and art of dialing. One Jacob

Alkendi, a learned man, wrote on shadows, A. D., 1579, also a treatise on Dials, called *Sciotherica*. Mention is made, also, of a Turkish savan, Mustapha ben Ali, who wrote a book in 1533, on the same subject. Upon the revival of learning in Europe, this science received increased attention; and, during the 15th and 16th centuries, treatises were written and new styles of instruments invented, almost without number. But, as lamps are not needed after sunrise, so, when clocks were invented, dials went gradually out of general use. Yet, as clocks would often get out of order, and needed regulating by some correct standard of time, dials were still found serviceable. They were also favorite embellishments of pleasure-grounds, because of the beauty with which they might be constructed, and the interesting associations time invested them with. Accordingly, we find that they have continued to be used to the present day, in all parts of Europe, and they are now being introduced more and more into the gardens and lawns of our own country. On beholding one of these classic registrars of time, in an English garden, Montgomery wrote "The Dial," of which the following is the first verse:

Fig. 5.

"This shadow on the dial's face,
That steals from day to day,
With slow, unseen, unceasing pace,
Moments, and months, and years away;
This shadow, which, in every clime,
Since light and motion first began,
Hath held its course sublime—
What is it?—Mortal man!
It is the scythe of time:
—A shadow only to the eye;
Yet, in its calm career,
It levels all beneath the sky;
And still, through each succeeding year,
Right onward, with resistless power,
Its stroke shall darken every hour,
Till nature's race be run,
And Time's last shadow shall eclipse the sun."

The *practical working* of the more common sun-dials may be explained thus: A circular or semi-circular plane surface is first provided, from one to two feet in diameter, more or less. A rod is supported over it, lying north and south, but with the north end elevated so that it shall lie parallel with the earth's axis; that is, the north end raised as many degrees from a horizontal position, as the instrument is located north of the earth's equator in degrees of latitude. In latitude 45° for example, the north end would of course be elevated 45 degrees, or just half way between horizontal and perpendicular. Instead of a rod on a support, a metallic plate is generally used, having the upper (northern) point projecting a little way. The plane is marked off with lines where the shadow of the point falls at different hours of the day. Sub-divisions of half and quarter hours, and sometimes minutes, are also made. A plate makes the shadow from its upper edge more distinct than if only a small rod were used. We have taken pains to collect and engrave a few of the finest patterns of Dials which we could obtain. We hardly advise our readers, Jew or Gentile, to copy in their pleasure-grounds the bacon-dial, above shown,—as a matter of *taste*, they might do better—still it is worth the while to keep a picture of it, as a curiosity.

Fig. 6.

Fig. 2 represents a simple, plain style, suitable for any body or any place. It might be cut out of granite or other stone; or, if made of pine or cedar, and well painted, it would last for many years. It will be understood that there is upon the top of each of the upright shafts represented, a horizontal plate marked with hour lines upon which the shadow from the indicator falls at the several hours.

Fig. 7.

Fig. 3 is a pattern devised by the eminent sculptor, THOM. It was first exhibited in this country, at the Fair of the American Institute in 1842, and was highly commended by the critics. It needs to stand upon an elevated terrace, or plinth of cut stone, to appear to the best advantage.

Fig. 4 is another good style. It has a solid look, yet is relieved of stiffness by the wreath entwined about the upper portion of the shaft.

Fig. 5 is perhaps the most perfect design we have to present. We are indebted for it to the kindness of Mr. C. M. Hovey, of Boston. If some of our city manufacturers of ornamental iron-work should make castings of this beautiful pattern, it would undoubtedly meet the wants of many amateurs.

Fig. 6 is a sketch of the Dial standing in the grounds of the late Mr. Downing, at the time of his death. A genial and appreciative writer, (Mr. Clarence Cook,) in giving a description of Mr. Downing's place shortly after his decease, speaks thus of his dial: "In passing along the path which we have entered, you catch a glimpse through the trees of the little sun-dial, with its motto, "*Horas non numero nisi serenas*," (I number none but sunny hours,) and few others ever passed over this happy place. When I first saw this dial, the ice was on the ground, and a little hillock of snow upon the top of the pillar, prevented the sun from recording the hours. I brushed away the snow to find the time. Mr. D. was with me, and, I remember, told me about some ancient dial he had seen abroad. This morning, the first snow is on the dial and on his grave."

Fig. 7 is a very good style, which we found in cast-iron, at Janes, Beebe & Co's in this city. Painted white, or any soft tint, and then sanded, to represent stone, it would have an excellent effect. It needs a cap of marble or other stone, to which the metallic dial-plate can be adjusted. This and all the patterns we have given, need to be set on a solid foundation of stone laid in mortar three feet below ground.

It is quite customary to engrave some motto or other inscription on the dial-plate. Of these, we give a few examples. The one adopted by Mr. Downing, and given above, is an ancient and very appropriate one. A neighbor and personal friend of Mr. Downing, sends us the following: "*Pereunt, et imputantur*,"—which may be freely rendered, "The hours are passing away, and are reckoned against us."

Here is another common one, and not very significant: "Time rides upon the dial's point."

A neighbor and friend contributes the following, copied from a dial in his own grounds,—"*Occasio calva post*," which we suppose means that "Opportunity lost is irrecoverable." Or it may be done into the familiar exhortation: "Take time by the forelock." A wag once standing by this dial-pillar and reading the rather blind motto, translated it thus: *An apology for a calf-post!*

Dr. Henry Bowditch, of Boston, being about to set an antique sun-dial, sent to the poet, John G. Whittier, a request for a suitable inscription. The poet returned the following gem:

With warning hand I mark Time's rapid flight,
From life's glad morning to its solemn night.
But through the dear God's love I also show
There's light above me, by the shade below.

But without pursuing this subject any further, at present, we conclude by requesting any of our readers who may have good mottoes in their possession, to send them to us for future publication.

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Making Home Attractive—A very Important Suggestion.

[In the multitude of subscription letters arriving at this season, there very often comes an added postscript, conveying an important thought, or a private word of approval and encouragement from some unknown reader, to which we attach far more value than to the money enclosure. From among many such we select the one below. The first part is printed not so much to gratify our own feelings, as to place it where we can ourselves see it often, as a thing to be aimed at, rather than one yet attained. We could not have described so well the character we would desire to have the *Agriculturist* merit.—The second part we print in emphatic type, hoping thus to impress its important truth more strongly upon the attention and memory of every parent.]

To the Editor of the American Agriculturist.

"In forwarding my subscription for 1860, and that of a relative to whom I wish the paper sent, I can not forbear expressing the satisfaction with which I have read the *Agriculturist*. I admire: 1st. Its candor, good sense, and genial spirit—2nd. Its steady, keen, and often amusing war with humbuggery—3d. Its broad views of agricultural interests—4th. Its illustrative engravings, at once beautiful, instructive, and calculated to allure to its pages the attention of the young, and of the anti-book farmers; the pictures are capital *bait* to the good reading—5th. Its high moral tone. An undevout agriculturist, like an "undevout astronomer is mad"; but unhappily, editors, like other men, are sometimes shy of expressing their opinion on the right side. I have been pleased to observe the spirit of the *Agriculturist* in this respect.—6th. Its arrangements for instructing, as well as amusing the children, helping them to understand how, with moderate means, a home can be made neat, comfortable, and attractive.."

"There is one thing I would be glad to see more parents understand, namely, that when they spend money judiciously to improve and adorn the house, and the ground around it, they are in effect paying their children a premium to stay at home, as much as possible, to enjoy it; but that when they spend money unnecessarily in fine clothing and jewelry for their children, they are paying them a premium to spend their time away from home, that is, in those places where they can attract the most attention, and make the most display.

With the best wishes for the continued prosperity of the *Agriculturist*, Very cordially yours

Willimantic, Conn. SAMUEL G. WILLARD."

Conversation, however light, should never approach in the least to the confines of impurity.

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Papering Damp Walls.

When paper is put upon damp walls, as in basement rooms or walls of stone houses, it is liable to mold and become discolored; it also easily peels off, the paste having no opportunity to dry, or becoming moistened afterwards. Mr. Chas. Streeper, Montgomery Co., Pa., suggests that this may be prevented by nailing narrow wooden strips, say half an inch thick, upon the wall, at intervals of six feet, and tacking sized muslin to these, upon which the paper may be pasted, thus keeping it from contact with the wall. Another correspondent advises in such a case to fasten the strips perpendicularly to the floor, and to pierce the paper with a few fine holes at the top and bottom to allow the circulation of air to carry off the dampness, for if the damp air were confined behind the paper, it would mold it. The wooden strips should not be so far apart, perhaps, yet when widely separated, the cloth and paper would yield, and lie back against the wall when pressed against. However, an arrangement of this kind would not admit of the very common but unmannerly practice of tilting back in a chair against the wall, as the paper would be torn, especially near the slats. It might prove a good thing on this account, saving the backs of chairs, preventing holes in the carpet, dents in the floor, and a lazy habit in loungers.

Hints on Kindling Fires and Using Hard Coal.

"It takes a fool or a philosopher to build a fire well," is an old saying. The fool blunders into the right way, and the philosopher finds it out scientifically, is the only explanation we know of for the adage. Certain it is that many persons make blundering work in starting fires, and in keeping them going. This is particularly the case in using the harder kinds of mineral coals. The softer Liverpool and American *bituminous* coals burn readily. In very many localities where wood is still used, mineral coal would take its place but for want of experience and skill. No housewife who has once become familiar with the steady all-day-heat of a good coal fire, will ever desire to return to the fitful, constantly-to-be-replenished wood fire, either for cooking or warming purposes. A tun of coal affords more heat than a full cord of the best hickory wood, so that when a ton of hard coal costs less than a cord of hickory wood all cut and ready for use, it is economical to adopt the former. Most other kinds of wood are dearer than hickory, if we take into account their smaller heating power.

In kindling and keeping up a fire, it is important to understand the "why and the how" of a draft of air. Warm air is lighter than cold, and consequently rises upward. To direct this draft to the point where it is needed, is the essential thing. The back woodsman puts down his back-log, sets the andirons or stones in front of it, lays on a heavy "fore-stick," and places one or two small sticks between this and the back-log, and starts the fire in the throat or narrow passage thus formed. The heated air rising, makes a draft through this small opening, sufficient to start the spark into a blaze.

In kindling all fires, it is important to secure this draft at the point where the fire is to be started. In a stove, if the fire be started back in the center, or on the top, only a little direct draft is obtained at the point where it is most needed. Put the kindlings at the front, or at the bottom, and close up access of air from other points, and the upward draft produced by the warm air in the pipe or chimney, draws a current of air through a small aperture in front, or at the bottom, where it is concentrated directly upon the kindling. The modern egg-shaped coal stoves have a small opening at the lower end for the entrance of the air, and are therefore most convenient for starting coal fires. The conical wide bottom stoves with a broad grate are better for giving a strong heat after the fire is started, because they present a larger air surface underneath.

We may here remark, that a thick or deep bed of coal is not economical in any stove, for the reason that the oxygen of the air is nearly all exhausted in the lower part, and the heat thus produced, changes the upper layers into gaseous products which go off unconsumed. Three or four inches of hard coal is all that can be burned economically. It is better to use only a thin layer, and replenish it more frequently. "Little and often" is a good rule. No more should be used than will be kept at a bright heat at the surface. The same reasoning applies to wood, as to coal. In a large body of wood where there is a free draft above, and only a little air admitted below, a portion of the fuel goes off unconsumed.

In kindling a coal fire, especially on a wide grate, we have found the following a good plan: Cover the grate with thin flat pieces of wood except in a small place in the center, or at one side near the draft hole. At this open place put a small compact mass of fine kindlings—not a quarter of the amount usually taken—and ignite them, putting on a considerable quantity of coal before, or soon after. The rest of the grate being covered, the draft is concentrated at the point where the fire is starting, and rapid heat is evolved. An upward draft is established, and the spreading heat soon burns away the thin pieces and in a short time the whole mass is kindled. In the absence of the flat pieces of wood, we have sometimes partly stopped the grate with small sticks laid into the openings, and sometimes partly covered it with ashes, to be raked out beneath, when the fire is well started at the open point. We have pitied many persons as we have seen them put in a whole armful of poor kindling wood over a whole grate, and then vainly try to get up a fire at one point. The small draft in the upper part produced by the feeble fire, draws air through the entire grate, but not enough at any point to produce rapid ignition. These remarks apply equally to wood and coal fires, both in stoves and fireplaces. We repeat: In all cases so arrange the fuel that the draft of air shall come from below, and be concentrated where it is most needed.

Dampers in stove pipes, or Chimneys are an abomination, unphilosophical, or at least unhealthy. Their object is to cut off or lessen the upward draft of air, and make the fire burn slower. There is a better way. Open the door, or in some other way admit air *above* the fire. This stops a part of the current of air passing through the fuel, and of course lessens the consumption, while enough air will still pass upward to keep it alive. The current of air passing through the door helps change the air of the room which is never too pure. The same end may be obtained by closing or nearly closing the draft beneath the coal so as to shut off the supply of air. A coal fire may be kept twelve to twenty-four hours, by nearly closing the draft underneath, and partly opening the door above the fuel. A little experience is necessary in every stove or furnace, to know just how far open to place a door, as this depends entirely upon the draft power of the pipe and flue above. The *higher* the pipe or flue be carried, the greater will be the draft, as this depends upon the *perpendicular* length of the column of light heated air.

The fool may blunder into building a fire well, but a general understanding of the "philosophy" of combustion would save more than one-fourth, if not one-half of the fuel now consumed in the country (many millions of dollars a year), and contribute not a little to people's comfort, and the maintenance of good temper. How many single "frets" are daily uttered over fires? How many persons will get through this Winter without scolding once a day, on the average, about some defect in, or trouble with their heating apparatus. Let every one, stop scolding for a month, and go to studying the philosophy, the science, of heat, hot air currents, etc., and practice upon what they learn. Perhaps we may help you further.

A Talk about Common Salt.

As common, and as abundant as is the use of salt, yet with this, as with many other common things, very few know anything of its composition, character, or utility in food. Let us look into the matter a little, And first a bit of science. Though existing in different forms, as *spring* salt, *bay* salt, *rock* salt, etc., all kinds, when pure, have precisely the same composition. The chemist will take 58½ ounces of pure salt, and show you that it is made up of 23 ounces of a white metal, called *sodium*, united with 35½ ounces of a greenish colored gas, called *chlorine*. (The chemist calls salt "*chloride of sodium.*") The metal, sodium, is like bright silver in appearance, but it is nearly eleven times lighter than silver. The chlorine is an air-like substance, 2½ times heavier than air, and not quite so transparent, for when a glass jar is filled with it instead of air, it has a greenish color, though you can see through it, if the jar be not large. This gas has a strong pungent odor, so much so that a pint jar full of it let out into the air in a large room, would set you to coughing, and a few quarts of it in the room would produce death.

If you fill a jar holding nearly five gallons (881 cubic inches) with chlorine, and then drop into the jar a single ounce of the white metal sodium, all the gas will condense down and unite with the little piece of metal, and you will then have 3½ ounces of pure salt. Is it not strange, wonderful even, that two such substances, as the pure bright metal, and the suffocating gas should thus unite, and make so simple and inert a substance, as the salt we eat every day? Yet this is a fact, and it is only one of the wonders that chemistry reveals to us respecting the most common things around us. If you want to help your imagination, just put a little salt in a saucer, and pour upon it a few drops of oil of vitriol (sulphuric acid), which every druggist keeps. The acid will take away the sodium, and the chlorine will rise up in a large volume, and almost suffocate you, unless the operation is performed in the open air, instead of in a closed room. (The chlorine thus obtained is not pure; it is united with another gas, hydrogen, obtained from the water in the acid; but the experiment will help the imagination, and give pleasure.) We hope this bit of science will make our common salt a more interesting object hereafter. We may add here, as a matter of interest, that calomel, that much dreaded medicine, is made up just as salt is, that is, with the same chlorine gas, and another metal, quicksilver (mercury), which takes the place of the sodium in the salt.

If you look at the finest ground salt with a magnifying glass, you will see that it is wholly made up of little cubic (square) blocks. These are very small, but the largest grains or blocks (crystals) of salt consist of a great number of the smaller blocks arranged together. Generally

these little blocks unite together so as to leave a hollow in the center, which contains water. When you heat salt on the stove, or on the hot iron, these little drops of enclosed water expand into steam, and burst open with a crackling noise, like so many little steam boilers exploding.

Into 100 pounds of water, put 37 pounds of pure salt, and it will all dissolve and apparently disappear, but add another pound, and the excess will not dissolve by heating or long standing. The cubes or crystals are all destroyed. Now heat the water so as to drive some of it off in vapor, and the little blocks (crystals) will begin to appear upon the surface, hardly perceptible at first, and grow larger and larger, and finally sink down in grains to the bottom. Keep up the heat until all the water is driven off, and you will get all the salt back. If the boiling be rapid a fine grained salt is obtained. Let the evaporation be done slowly, so as not to agitate the brine, and a greater number of the little blocks will unite together and form larger crystals, or coarse salt.

Sea water, when evaporated in the sun, or by boiling, leaves its salt behind, and we thus get sea salt, or bay salt. Much salt is made from sea water at Turks Island, 200 miles east of Cuba.

Many springs, and wells, contain salt which can be obtained by boiling away the water, or drying it off in large shallow pans or wooden boxes. Millions of pounds of salt are thus obtained at and near Syracuse, N. Y., where hundreds of acres are covered with boxes or vats, and boiling establishments. The water is obtained there from natural springs, and especially from deep artificial wells. At many other places, smaller quantities are made from spring or well water.

Large beds of solid salt, ready formed, are found in some parts of the world, and salt is dug out from these, just as coal is dug up from the earth. This is usually called "rock salt," though salt manufactured from sea water, when in large crystals, is frequently called rock salt.

Most salt, especially that boiled down at the springs, contains a mixture of magnesia, lime, etc., (in the form of chlorides.) These give it a bitter taste, and injure its value, especially for salting butter. These impurities attract *moisture* from the atmosphere, and you can generally determine the purity of salt, by observing whether it is dry and crisp, or damp and soggy to the hand, especially in damp weather.

It is easy to remove the magnesia and lime, for the chlorides of these are more soluble than the pure salt. To do this, pour about three quarts of boiling water upon 18 or 20 pounds of salt in a pail, stir it quickly and thoroughly; let it stand for an hour or two, pour off the water, and hang the salt in a bag, or lay it on a cloth upon slats to drain and dry. One washing will nearly purify it, but two washings may be made, when the very best salt is desired. The water from the second washing may be left to evaporate, and the salt obtained, used for animals. A quart of water will wash out about ¾ pound of salt.

So much for the general character of salt. In another article we will speak particularly of its use in food, its good and bad effects upon the human system, the proper quantity to be consumed in food, its use in preserving meat, etc.

Hints on Cooking, etc.

CURING HAMS.

Mr. I. Lamborn, Chester Co., Pa., writes that he has cured hams and rounds of beef (for smoking) by the accompanying directions, for thirty years past, and with the best success: Apply as much good molasses to the fleshy part, as will adhere without running off, lay them on a table in a cool place, and put upon and around them as much good ground salt as will stick to them, pushing some of it into the ends of the hocks. Renew this during three weeks as often as it dissolves. Use no saltpeter. Then clean off the salt, sprinkle lightly with a mixture of black and red pepper, and smoke. It is of much importance that the smoke should be cool when coming in contact with the meat, to secure which the fire should be at some distance from the hams."

OYSTER SOUP.

Mrs. Crowen's Book gives the following good directions for making it: Heat together three pints each of milk and water. While boiling, add half a pound of butter crackers pounded, and a pint of oysters chopped fine. Cook until the Soup is well flavored by the oysters, and the crackers are well swelled; salt and pepper to the taste, add three pints of whole oysters, and quarter a pound of sweet butter. Keep covered, and cook ten minutes more, and it is ready. [We would leave out a part of the butter at least.]

TIP TOP CAKE.

A lady reader recently sent us a neat box of cake, and accompanied it with the directions for making. We endorse the name, the cake was *tip-top:* Dissolve 1 teaspoonful soda in 1 cup of sweep milk; add 1½ cups sugar, 2 eggs beaten, and 1 tablespoonful of butter, with spice to taste; stir 1 tablespoonful cream of tartar in 2½ cups flour; then mix the whole, and bake in a quick oven.

HONEY DEW BISCUIT.

Mix thoroughly one cup of fresh butter, one of loaf sugar, one ounce of strained honey, one cup sour cream, two of flour, one teaspoonful soda (rubbed dry in the flour), half a teaspoonful salt in the cream, and one egg. Bake in a hot oven 25 minutes. We have frequently seen it recommended, and it reads well, though we have not yet had it tried.

HAM TOAST.—Mrs. C. O. Brown, Calhoun Co., Mich., directs: Boil ½ lb. of lean ham, and chop it fine. Add the yolks of 3 eggs, ½ oz. butter, 2 tablespoonfuls cream, and a little red pepper [not for us—ED.]; stir it over the fire until it begins to thicken, and spread it over hot toast.

SALTING BED-BUGS.—Mrs. F. E. Dixon, Monroe Co., Mich., recommends washing bed-steads with strong brine, and then rubbing them with salt, which she says will infallibly expel bugs.

DIRECTIONS WANTED.

Some subscribers inquire for directions for making the genuine soda crackers; others desire to know how to get up the best Graham biscuit, or such as are sold by bakers. Will some retired baker or other person fully competent to do so, please respond to the above for the benefit of a multitute of ladies, taking their thanks for pay, or part pay!

Familiar Talks by the Doctor.—No. I.

[Farmers, as a class, are pretty healthy, yet even they and their families suffer much needlessly. The various ills and doctor's "bills," they ever stand in fear of, would, we believe, be greatly lessened, and their comfort be much promoted, were there a better understanding of the laws of health, and the methods of avoiding sickness and pain. It is with pleasure, therefore, that we begin in this number a series of familiar chapters, by one abundantly able to give sound practical advice. With this simple endorsement of the writer's ability, and we might add, reliability, we will leave his chapters to speak for themselves, as they will doubtless do in a manner both interesting and instructive.—ED.]

MR. EDITOR: It is said that the Chinese pay their doctors a certain sum so long as they have no need of professional attendance, but as soon as they fall sick, the doctor's pay stops. Such a system would have some advantages, and labor under some inconveniences. For instance, one might suppose that the doctor would try to cure his patient as soon as possible (which indeed every honest man in the profession now does), and thus save him some time; while on the other hand the patient might feign sickness, or even get himself a little out of health, as a matter of *economy*, to lessen the doctor's bill.

It is a very natural question for you now to put to me: "Why all this talk about Chinamen and doctors? Can you be coming round to *Dioscorea Batatas* or *Sorghum?*" True, both the sugar cane and the potatoes, so called, which bear these names, come from China, (some think that the Dioscoreas are big enough to come right straight through, without going round by sea), but I do not propose to talk of them. Neither have I got any 'ax to grind,' any selfish purpose, in addressing you, but I desire to talk as a Doctor to Farmers.

Perhaps you may think I desire to talk of pills, either big or little, of mustard plasters, of homeopathy or hydropathy, or some other pathy. Not a bit of it. I am a firm believer, (as I have reason to be) in the science of medicine as a whole, not split up into any *one-idea* kind of doctrines, and having a decided opinion, I do not hesitate to express it at the proper time, and at the proper place, neither of which this is.

My purpose is to point out to your many readers some ways in which farmers are unnecessarily careless of their health, entailing upon themselves much unnecessary suffering, and too frequently allowing their children to drop prematurely into their graves.

It has been my fortune, to see a good deal of farmers and of their families in a professional way, as well as socially. Of course, the little or great errors which they commit in their way of life, could not be unnoticed, and yet it is impossible to speak to the individual of some of these things. By speaking to the whole class, no one will feel personally aggrieved, and yet many may lay the lessons to heart.

It also happens to have been my lot to talk to doctors a good deal for the last ten years, both by the mouth in the lecture room, and by the pen in medical journals, and I have very frequently had occasion to dwell on the health of our agricultural population, and upon those things which affect that class injuriously. So too, I have had occasion to comment on the employments of various classes of mechanics, and to point out some of the injurious influences which surround them. But in no *professional* journal can one reach so large a number of readers, as through the *Agriculturist*.

Should any crusty reader (I suppose, Mr. Editor, that you have some of that class, I hope not many,) growl at me for proposing to point out to him any error in his mode of life, which might be avoided to the benefit of his health, I make haste to say to him, that I do not for a moment think of giving *him* any information. But then, Mr. Crustyman, do you think it would be a very bad idea to hint to your neighbor, Jack Tremble, that if he would thoroughly drain that boggy meadow just across the road from his house, he would not only make a good thing of it agriculturally, but save a good deal of money that he now pays to doctors (perhaps to myself,) or for fever and ague remedies; and save a good deal of time that he now has to spend dawdling round, doing little or nothing, because he has a shake coming on, or has one going off, or because he has been weakened by the doses he has to swallow; to say nothing of lengthening his life ten or a dozen years! *He* has no idea that that boggy hole is what keeps him poor, when it is all ready with a little help to make him rich; but then *you* and *I* can see it plainly enough. Suppose we just go over and tell Jack what we think! He will take it kindly.

Between you and me, Mr. Editor, I have got something to say to Mr. Crustyman bye and bye, as to what gives him so much dyspepsia, as he calls it, and makes him a little inclined to be cross. But he will not bear it now.

An illustration of the way doctors see causes of ill health entirely within the patient's control, but without suspicion of the fact on his part, I draw from my own experience. While a medical student, I was once going with my preceptor to see a case of surgery, when a man stopped him, and asked him to come to his house to see his mother. We found her a nice person, about sixty years old. Everything showed that the farm was made to pay, and that the housekeeping was not neglected. After hearing the patient's story of pain through her chest and about her heart, I was running over in my mind the symptoms of various diseases of the heart, trying to make out which it was, and hoping I should have an opportunity to listen to the sounds which the heart makes. Dr. C. was evidently going through a very similar process. The result of my thinking was, that I did not know what the disease was; and I began to think the same was the case with my senior. He sat looking at the patient awhile, with a peculiar look in his eye, that I had learned to rely upon as promising that something odd was coming, and then suddenly asked her: "How many times a day do you smoke?" Thinks I to myself, well, Dr. C., you have made a pretty mistake this time, asking this nice old woman such a question, when to my astonishment she said: "Not usually more than three times." Her heart was sound, and all her troubles came from smoking, but she had no more idea of it, than Mr. Crustyman has of the cause of his dyspepsia.

P. H. E.

"SLY BOOTS".—FROM A PAINTING IN WATER-COLORS BY C. H. WEIGALL
(Engraved for the American Agriculturist.)

The Editor with his Young Readers.

Ting-a-ling-ling, ting, ting-a-ling. School's open again for a new term. How short the vacation has been, since we dismissed you and closed up the last session, a month ago. Ah, here you come again young friends, by the hundred, by the thousand, aye, by the ten and twenty thousand! What a lot of you! Don't you enjoy being in so large a company? We do. We can't stop to call the roll today. Some will be late perhaps—staying at home to finish up Christmas and New-Year's. Let's look out of the window, down the road, and see the troops of new children, large and small—all so joyous and happy. But who's that down the lane there, all alone? Oh, that's

MISS "SLY BOOTS."

Wonder what she's up to now? Some mischief perhaps. No, not exactly mischief, there's more fun than mischief in her eye. See how she stands with her finger on her lip earnestly thinking of something. Her mother says "she's so full of fun it keeps running over." Well, we like to see children in good spirits, and we can't help liking "Sly Boots"—she is always so good natured. If any of her playmates are out of humor with themselves, or with others, she gets them into a hearty laugh before they know it. But we wish she would leave off some of her mischievous tricks. Though we like her some, we would like her still better if we could forget that last Summer she made a hen's nest of her bonnet, shut the chickens in the pantry, dropped the kitten in the cistern to see it swim, covered the cat up in the churn to hear her mew, and, worse than all, hid her mother's scissors so as to see her perplexity in looking after them. Those were bad tricks. *None should ever make fun for themselves when it will give pain or discomfort to others, even to animals. That is selfish, and as bad, as to appropriate the money of others to enhance one's own comfort or enjoyment.* But our Miss "Sly Boots" has talked with us about those naughty deeds, and promised to be more careful hereafter; and we believe her, for she really felt bad. Still you can see she is as frolicsome as ever. Wonder what's the matter with her bonnet? It looks as if it had been a hen's nest again, or she had used it in catching butterflies. We are glad to see her appearing so plump and healthful. That comes of being active, with plenty of out-door exercise, and especially from being always cheerful. Good natured, cheerful children, always enjoy better health, and are more loved than those who are fretful, morose, fault-finding, or quarrelsome. Remember that, young friends. Now we must look after some of the lessons for the term, and we leave you to guess what "Sly Boots" is thinking of, standing there by the lane fence. Can you also tell us how she first got her name? Perhaps you know, we don't.....Why! why! we have been so much taken up with the picture, that we had forgotten what was first and uppermost in our thoughts—to wish you, one and all, Boys and Girls,

"A HAPPY NEW YEAR!"

and plenty of good things to begin it with, and memories full of credit marks when the year closes. It seems but as yesterday that we welcomed in the year 1859. How the years fly by, swifter than a weaver's shuttle, which you catch but a glimpse of, and it is gone. Yet it left a thread as it passed, and each thread helps make up the fabric. So these year shuttles are each contributing threads to the life's fabric. As the weaver constantly watches the woven cloth, to see if there be any broken threads, any knots, any poor spots, let us examine the little threads, the little acts, thoughts, feelings, and tempers, and see that there are none to mar our character, let us look over the work of the past year, and ascertain where we have failed, and resolve to watch more closely hereafter. Let us resolve today, that every thread in 1860, from the very beginning to the end, shall be as perfect as possible....There are many

PLEASANT REMEMBRANCES

connected with the events of the past year, in our own experience. Perhaps nothing has pleased us more than to read in many letters from your parents: "The children love the paper:" and especially to receive from the boys and girls themselves so many good little letters. These, and our monthly chats, when we have sat down, and in imagination called around us a vast throng of little folks, have been pleasant indeed, and have lightened many hours of toil and care. There have been to us some dark days, as when we were in that "corner," we told you of; but every cloud has had its silver lining. Still

SAD MEMORIES

also come gushing up, as we recall the fact that some of those who reëchoed our own "Happy New-Year" last January, are not with us to-day. One and another of our company, like little Mary we told you about, has been called away to join another throng. Some of us will go this year. Let us all be ready to go as cheerfully as "Mary" went, and strive, like her, to be ready, having always on the spotless garments, purified from the stain and filth of sin, and fitted to wear among the dwellers in that better land.

A CAPITAL TRICK THAT ENDED WELL.

Here is a good story which we have just heard. A young man (a brother to "Sly Boots" perhaps, for like her he enjoyed a good joke), was studying in college. One afternoon he walked out with one of his instructors, and they chanced to see an old pair of shoes lying by the side of the path, which appeared to belong to a poor man at

work close by. "Let us have a little amusement at his expense," said the student. "Suppose we hide these shoes, and conceal ourselves in the bushes to watch his perplexity when he can not find them."—"I can think of a better trick than that," said the instructor. "You are rich, and suppose you put a silver dollar in the toe of each shoe and then we will hide."—The young man did so. The poor man finished his work soon, and went to put on his shoes. You can imagine his surprise, when he stooped down to take out a pebble, as he supposed, from the toe, and found it to be a hard dollar, and then his absolute perplexity and astonishment, when he found still another dollar in the other shoe. His feelings overcame him; he fell upon his knees, looked up to Heaven, and uttered aloud a fervent thanksgiving, in which he thanked a kind Providence for sending some unknown hand to save from perishing his sick and helpless wife, and his children without bread. Do you wonder that the young man stood in his hiding place deeply affected, and his eyes filled with tears? Young friends, and you Miss "Sly Boots," when you want to enjoy real fun, real pleasure at witnessing the perplexity of others, see if you can not in some way imitate the student. Such tricks are worth performing.

DID NOT KNOW HIS BEST FRIEND.

A laughable mistake is said to have occurred recently on a western steamboat. An elderly gentleman whose sight was not very good, while walking up and down the long saloon, stopped near one end, and addressed an individual he met, thus. "Is your name Scott"? No answer was returned. Thinking he must be deaf, he repeated in a louder tone, "*Is your name Scott*"? still no answer. Once more he shouted, "IS YOUR NAME SCOTT"? but receiving no reply he turned away saying, "Well, you are either no gentleman or very deaf." The passengers were convulsed with laughter—he had been addressing his own image in a large looking glass."

HOW "LEW" WAS CAUGHT.

A subscriber contributes the following: We had a colored man familiarly called "Lew," living in a tenant house not far from the homestead on the farm. He was considered shrewd, but proved eventually not to be over honest. Soon after his employment, our supply of eggs diminished rapidly, but we could not trace any of them to "Lew" or his wife, though there was an excess of egg shells near his house. One day he came into the kitchen and contrary to his usual polite custom, he did not doff his hat. Knowing his habit of scratching his head when perplexed, I asked him a puzzling question, up went his hat—and down rolled an egg, smash upon the floor! He could not well blush 'red,' but with a sheepish look he stammered out, "Guess I might better left um in the nest."

WEIGHING THE EVIDENCE.

A correspondent gives the following which is worth telling as it will be new to most of you, if not to all. A gentleman missed two pounds of very fine butter which he had kept for a special occasion, and charged the cook with having stolen it. She declared the kitten had eaten it, and that she had just caught her finishing the last morsel. The gentleman immediately put the kitten in the scales, and found she weighed only a pound and-a-half. The cook thus confounded, confessed the theft.

A RESERVED MAN.

Some people appear to enjoy themselves most, when let alone entirely. They say very little, and dislike to be questioned or even spoken to by strangers, and remind you of an oyster, who only opens his mouth to take his food. One of this class was traveling in a stage with a very talkative man who tried hard to engage him in conversation. They were both smoking, and the talkative man after speaking of several things and receiving no answer, remarked to his companion that the ashes from his cigar had fallen upon his vest, and a spark was burning his handkerchief. "Why can't you let me alone?" growled out the other, "Your coat tail has been burning the last ten minutes, and I didn't bother you about it."

FUN FOR BOYS IN WINTER.

Not skating, or coasting, or snow-balling, or sleighriding, and such like out door sports; these are all well in their place, and we hope you will enjoy them to the full. But we suggest some sport in addition. Do you, boys, ever make experiments in chemistry, philosophy, and do you gather specimens of wood, minerals, plants, seeds, etc? We knew a boy living in a log-house in the "Western woods" who made a great many of the experiments described in Comstock's old Philosophy and Chemistry, with materials found on the farm. He used tubes of elder wood for the hydraulic apparatus, for chemical tubes, etc.; with glass jars and bottles and soldier's brass buttons, he got up a very effective electric machine—the first one ever seen in that neighborhood; and so of many other things. Let us tell you of a farmer's home we recently visited, where there were a number of boys and girls. The family was pretty well off, and the children better supplied with money and other facilities than are many households, but the example may be imitated in part at least, and you will be surprised at the number of things you can do with small means, when you set about it earnestly.

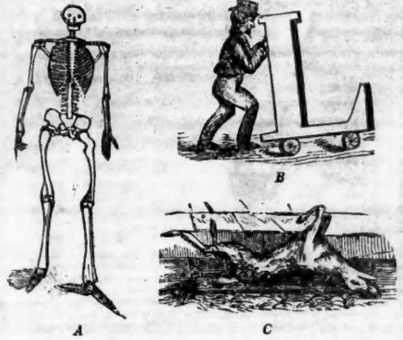
In the family referred to, much of the spare money was used in buying engravings of fine kinds of horses, cattle, sheep, poultry and other animals, and of farm implements, and other machinery. A good library of books of different kinds, supplied reading for nights and rainy days, and the subjects read about, were discussed in conversation. The children, both boys and girls had a chamber room which they called their "office," where they kept their books, papers, pictures, minerals, and other curious things, all arranged in due order.—One young curly-head had a bent for mechanics and was called "Our Mechanic." He adorned his corner of the room with miniature wheel-barrows, horse-rakes, hoes, harrows, and mowing machines. Another was a "Botanist," and had his shelves covered with sections of all kinds of wood growing in the neighborhood, also herbariums of dried plants. Another was called the "Artist," and spent much of his time in drawing pictures of flowers, leaves, fruits, and animals and coloring them from life. His corner was perhaps the most highly embellished of all. Another was fond of speech-making, and often compelled his young auditors to sit in due order around the office, while he harangued them upon the importance of scientific husbandry, of universal education, and the grand prospects of the rising generation!

Doubtless, a critic might see things in this office to smile at; but we were exceedingly pleased with our visit to it, and wish that such offices might be opened in every part of our country. What say the boys?

NEW PROBLEMS.—No. 1. A and B bought 80 lbs. of beef at 4 cents per lb., paying for the whole. In dividing it A took 50 lbs. and B 30 lbs., but A's part being better, he is to pay ½ cent per lb. more than B. How much must each pay per lb.?

No. 2. Word Rebus.—Man tea bonnet purchase the plow fuel grow the very person obliged one of the two contain or propel—The puzzle here is to substitute for the words in this sentence some other words having the same or similar meaning, so that the new sentence shall make an excellent agricultural proverb in rhyme.

No. 3. PUZZLING PICTURES.



A is a General of whom all have heard.
B represents a common and useful farm implement.
C Is very much like a cheese.
See if you can find out how each picture resembles what it is said to represent.

Answer to Agricultural Enigma (in NOV. No.). "*Chinese Sugar Cane.*" Correct solutions received from Alida Gilbert, "Mottville," N. Y., Charles O. Potter, Milton B. Turner, Pearson H. Bristow, Sarah D. Lord, Edwin F. Treat, John G. Storrs, Kenner Seaton, W. A. Buckhout, Jas. H. Dony, (thanks for your kind words and good *works*,) Jno. H. Treadwell, Harry La Fetra, Hiram H. Palmer, Matilda F. Van Houten, Mary E. Moore.

The following have found their way into the Labyrinth in the Dec. No.: Jno. A. Bittle, Chas. T. Simpson, Wm. H. Thornton, Wm. E. Jones, Dottie Noble, Wm. G. Kieffer, Peter Bloom, Gilbert Spicer, Theo. T. Kieffe.

Read the Articles on Manures.—We want all our young friends to read the articles on manures, the first one of which will be found in another part of this paper. You will find some interesting things about the growth of plants, and we feel quite sure you will gain much information from those articles, which will be of use to you hereafter.

"How things are Made."

As already announced, we fully expected to begin in this first number of the volume, an interesting series of articles on "How things are Made," but the first article is necessarily delayed. That this delay is not the fault of the Publishing Editor, the following note will show:

To the Editor of the American Agriculturist:

I am sorry that circumstances which I could not control, force me to disappoint you in the article with which I intended this month to begin the promised series on "How things are Made." You may rely that I shall not disappoint you next month, and I beg the readers to pardon a delay, which was wholly my fault, and not yours.

New-York, Dec. 15, 1859. Yours truly, N.

Premiums.

Improvement—Onward—Upward, is our motto. We intend to make each succeeding volume better than its predecessor, *in every respect.* We also desire to secure a wider sphere of usefulness, and to this end, we offer the following *premiums* to those who will assist in the work of extension. In selecting the premiums, we have aimed to get such as are *useful*, and as have been most frequently called for by our readers.—*Each article offered is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be even better than those sold in the market at the prices named, when possible to select better.* Through the kindness of the manufacturers we get these articles for premiums, and for these only, at the bare cost of making, or we could not offer them as we do. The premiums are certainly liberal, when we take into the account the cost and character of the paper, and the low price at which it is furnished.

N. B. *These premiums are not offered for competition, but as direct* PAY *for time, labor, and expense incurred by canvassers. The premiums are absolute in each case, and not dependent upon what some unknown person is doing. Every canvasser knows just what he or she is working for.*

☞ See remarks following the premiums.

Premium III.—Every person sending in a club of 10 *new* subscribers at 80 cents each, may order a free copy of either Vol. XVI, or Vol. XVII. or Vol. XVIII, which will be sent in numbers, post-paid.

Premium IV.—Every person sending 15 *new or old* subscribers at 80 cents each, will be entitled to 16 copies (that is one extra copy), for the coming year.

Premium V.—Every person sending 25 *new* subscribers at 80 cents each, will be entitled to the *three* Volumes, XVI, XVII, and XVIII, sent in numbers post-paid.

Premium VI.—Every person sending 30 *new* subscribers at 80 cents each, will be entitled to a silver-cased *pocket Microscope*—with Coddington lens. Value $4. Sent by mail securely packed and post-paid. (See Premium 18.)

Premium VII.—Every person sending 45 *new* subscribers at 80 cents each, will be entitled to a copy of the large new *Pictorial Edition of Webster's Unabridged Dictionary.* Price $6.50. It weighs 8¼ lbs, and can go by express, or be sent by mail at 1 cent per ounce within 3000 miles, or 2 cents per ounce over 3000 miles. (Expense after leaving the city to be paid by recipient.)

Premium IX.—Every person sending 144 *new* subscribers at 80 cents each, (or 100 at $1 each), will be presented with one of Wheeler & Wilson's best **$50 Sewing Machines**, new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly two year's use in our own family. We want no better.—The machines will be selected at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using go with each machine.

Premium XII.—To every person sending 130 *new* subscribers at 80 cents each, (or 95 at $1 each), we will present *Appleton's New American Encyclopædia*, now in course of publication, consisting of *fifteen large volumes* of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Eight volumes are now ready, and the remaining seven will be furnished as fast as issued. Publisher's price, $45.

Premium XIII.—To every person sending 260 *new* subscribers at $1 each, or 330 at the lowest club price (80 cts. each), we will present one of *Allen's Mowing Machines*, with sundry improvements now being added. This is one of the best we have seen in operation. Price $115. Other kinds of Machines of the same price, will be substituted, when specially desired, if satisfactory arrangements can be made with the manufacturers.

Premium XIV.—To every person sending 65 *new* subscribers, at 80 cents each, we will present one of the best *Eagle Plows* (2-horse). Price $11. This we believe is the best general farm plow in use.

Premium XV.—To every person sending 55 *new* subscribers at 80 cents each, we will present the best *Subsoil Plow* (two-horse), price $8; *or* one of the best *Horse Hoes*, price $8; *or* one of the best *Straw and Hay Cutters*, price $8. These are all first quality, well-made, and useful implements.

Premium XVI.—To every person sending 48 *new* subscribers, at 80 cents each, we will present one of the best *Steel-both Cultivators.* Price $7.

Premium XVII.—To every person sending 45 subscribers at 80 cents each, we will present either the Dictionary, (premium 6), or one of the best *Hand Corn Shellers*. Price $6.50.

Premium XVIII.—To every person sending 30 subscribers at 80 cents each, we will present either the microscope, (premium 3,) or a *Double mold-board (ridging) Plow*. Price $3.50.

Premium XIX.—Books. Whenever desired, instead of other premiums, the publisher will pay premiums in books as follows: Every person making up a club of 20 or more *new* subscribers, may select any Agricultural or Horticultural Books from A. O. Moore's Catalogue, (which is advertised on page 316 October Agriculturist) to the amount of 10 cents for every subscriber, sent in at 80 cents each. Persons making up a club for any of the premiums, and getting some names over the required amount, will be entitled to books for the surplus names. Thus, a person getting 55 subscribers can take for 45 names premium VII. or XVII, and also $1 worth of books for the extra 10 names; and so in other cases.

REMARKS.—1. *The above premiums, except No. IV, are all for* NEW SUBSCRIBERS ONLY; *as we can only afford to pay premiums for once on the same subscriber. But* ☞ *in making up any premium lists, three renewals of old subscriptions, collected and forwarded by the canvasser, may always be counted as one* NEW *name.* ☞ *Names need not all be at the same Post Office.*

2. Of course but one premium can be paid on the same name. The canvasser will choose his own premium. Any one striking for a higher premium, and failing to get names enough, can still fall back upon a lower one.

3. Every person collecting names for premiums can send in the names with the money as fast as received, so that the subscribers may begin to receive their papers; but if designed for premiums, a double list of each lot of names should be sent, one of them marked at the top, "For premiums," and with the name of the sender.

4 The above premiums are offered for new subscribers for Volume XIX (1860) Canvassers will have at least until Feb. 1 for completing their lists, but the premium will be paid as soon as any list is made up.

Seeds for Free Distribution in 1860.

Each person whose paid subscription to the American Agriculturist *extends beyond February, 1860, will be entitled to select four or five parcels of seeds from the general list given in the next column—if the following conditions be complied with.*

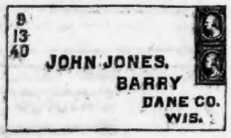
A. It is of absolute importance that the following directions be *strictly* followed, even to the minutest particulars. We have **93** distinct varieties of seeds, to be distributed among 70,000 or more persons scattered all over the country, which, at the best, will involve immense labor, and some mistakes must unavoidably occur, unless each subscriber take special pains to facilitate the work.

B. The seeds can be called for at the office, (after Jan. 15) or be sent by express, or in ready prepared envelopes furnished by the subscribers, as described below.

C. Subscribers at different points can estimate whether they can receive their seeds cheapest by Mail to separate individuals, or in a package by Express.

D. If to go by Express, no envelopes will be needed. In that case, simply send us a written list of the names, marking against each name the kinds of seed desired, *using the numbers in the Catalogue.* Keep a copy of the list sent, and give particular directions *on each list*, how the package is to be forwarded, and to whom directed.

E. If to go by *mail*, the applicant will (of course) furnish *prepaid* envelopes, of ordinary size, which should be prepared as in the engraving here given—that is: Put the figures corresponding to the Catalogue plainly on the upper left hand of the envelope, and put all the postage stamps upon the right side of the envelope—one above the other when two or more are needed, as shown in this pattern. This will prevent the seeds being crushed in the stamping process, in the Post-Office. One ordinary envelope will generally hold the amount of seed-packages carried by two or three stamps. ☞ *The amount of stamps can be calculated from the Catalogue. Single* 1-*cent stamps on letters are of no value, unless there be even threes of them, as letter postage is rated by the half ounce.*



F. Let all letters referring to seeds be as brief as possible, and yet plain. All such communications are referred directly to the clerk superintending that department. It is especially desirable that whatever relates to seeds should be on a *separate* slip of paper. (We shall probably distribute over *three hundred thousand packages*, and a minute's time saved on each of these would amount to 500 working days of 10 hours each—or nearly two years!)

G. Canada subscribers will need to substitute 10-cent stamps in all cases where 3-cent stamps are named in the catalogue. When several send together, it will usually be cheaper to receive seeds by Express. (Postage is not necessarily prepaid *here*, on Canada letters.)

H. Always put the stamps upon the envelopes, and not drop them loosely into the enclosing letter.

I. It is always better to send envelopes of the ordinary size, and made after what is called the "Government pattern,"—that is, those in which the back comes under the piece lapping over; these seal up more firmly. This point is not essential, however.

J. Usually, the *lighter* the envelope the better, that more seeds may go under the same stamps.

K. Send only the number of stamps required for postage on the seed. We have no seeds of any kind to *sell*.

L. Those forwarding *unpaid* envelopes, will, of course, not be disappointed if they do not return. We offer seeds *free*, but cannot, in addition, afford to pay postage also.

M. All seeds sent by mail are put up at our country residence, and each package is there mailed *direct*, to avoid its being overhauled at the Distributing offices.

N. ☞ We shall take time to mail all the seeds carefully and regularly. This will occupy the entire months of January and February. Those going to distant points, where the seasons are earliest, will be mailed first.

LIST OF SEEDS.

[For Descriptive Notes upon these Seeds see pages 3 and 4 of this month.]

Field Seeds.

2—Improved King Philip Corn—Single, double, or triple packages, as may be desired, requiring one, two, or three 3-cent stamps.
3—Stowell's Sweet Corn—Same packages as No. 2.
94—Crystal Flint or Hominy Corn—Same as No. 2.
6—Ashcroft's Swedish Turnip—Half of 3-cent stamp.
7—River's Swedish Stubble Turnip— do. do.
70—Waite's London purple-top Swede Turnip—do.
98—Long Red Mangold Wurtzel—One 3-cent stamp.
101—Improved Long Orange Carrot—½ of a 3-cent stamp.

Vegetable or Garden Seeds.

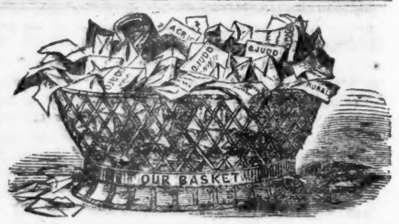
8—Daniel O'Rourke Pea—Packages same as No. 2.
9—Champion of England Pea—One 3-cent stamp.
99—Prince Albert Pea— do. do.
57—Eugenie Pea— do. do.
58—Napoleon Pea— do. do.
12—Green Kohl Rabi—One-third of a 3-cent stamp
13—Enfield Market Cabbage— do. do.
15—Mammoth Cabbage Lettuce— do. do.
63—London Particular Long Scarlet Radish—do.
64—Extra Red Round Turnip Radish— do.
100—Early Purple Cape Broccoli—do. do.
21—Winter Cherry— do. do.
95—Hubbard Squash— do. do.
102—Mammoth Leghorn Squash—do. do.
108—Mammoth Pumpkin— do. do.
109—Mammoth Red Tomato— do. do.
72—Imported Brussels Sprouts— do. do.
76—Musk Melon— do. do.
77—Water Melon— do. do.
103—Sage— do. do.
104—Thyme— do. do.
105—Chili Red Pepper— do. do.
106—Sweet Marjoram— do. do.
17—Red Strap-Leaf Turnip—One-half of a 3-cent stamp.
74—Solid White Celery— do. do.
75—Green Curled Endive— do. do.
55—White Globe Onion— do. do.
71—Long White French Turnip—One 3-cent stamp.
107—Giant Asparagus— do. do.

Flower, Fruit, and Ornamental Seeds.

89—Cotton Plant (2 kinds)—One 3-cent stamp.
90—Norway Spruce Seed—One-half of a 3-cent stamp.
91—Arbor Vitæ Seed— do. do.
112—Broad-Leaved Laurel— do. do.
111—Castor Oil Bean— do. do.
110*—New-Rochelle Blackberry—½ of a 3cent-stamp.

On an average about five of the following 40 *varieties will go under a 3-cent stamp.*

23—Mignonette.
25—Mixed Nasturtiums.
27—Extra Cockscomb.
29—Double Balsams, mix'd.
30—Tassel Flower.
31—Chinese Pink.
32—Portulaccas, mixed.
33—Cypress Vine.
34—China Asters, mixed.
35—German Asters, mixed.
38—Sweet William.
40—Escholtzia Californica.
42—Foxglove.
47—Morning Glory, mixed.
49—Candytuft.
50—Schizanthus.
51—Phlox Drummondii.
78—Ageratum Mexicanum.
80—Yellow Hawkweed.
81—Canary Bird Flower.
82—Thunbergia.
83—Snap Dragon.
84—African Marigold.
85—Gaillardia, mixed.
86—Euphorbia, mixed.
87—Coreopsis.
113—Double Sun Flower.
114—Mixed Petunia.
115—Mix. Dbl. Hollyhocks
116—Mourning Bride.
117—Mix. Dbl. Wallflower.
118—Bee Larkspur.
119—M'dChrysanthemums
120—Clematis (Climber,)
121—Trumpet Creeper.
122—M'd Canterbury Bells
123—Gilia nivalis.
124—Whitlavia.
125—Ipomopsis (standing cypress).
126—Long-tubed Centranthus.



Into which are thrown all sorts of paragraphs—such as NOTES *and* REPLIES *to* CORRESPONDENTS, *with Useful or interesting Extracts from their Letters, &c., &c.—to be drawn from as we have room left here.*

Erratum. In the recipe for "Tip Top Cake," on page 23, for *tablespoonful* of cream of tartar read *tea spoonful*.

To Correspondents.—An unusual lot of communications, hints, suggestions, and queries are coming in daily with the letters enclosing subscriptions. We have also several letters received heretofore, but laid aside for consideration. Not unfrequently a query is kept for months in order to make investigations, or to find time and place for a reply. We are thankful for the many favors received, but trust our friends will be patient if we sometimes keep their letters on hand for months, until a seasonable opportunity occurs to introduce them. Very often a studied article is suggested by a dozen or twenty queries, without referring directly to them.

One other item. We try to adapt articles to the season in part, and often prepare items which lay over until their appropriate time. Further, the length of time required to work off the large edition of the inside sheet, which contains most of the illustrations, and must be printed slowly, compels us to prepare all matter for that sheet, and send it to press a month in advance, and articles appropriate to those pages (9 to 24) must be on hand several weeks before they can appear.

Carrots for Horses.—L. B. S., Clarke Co., Va. Carrots are undoubtedly valuable as feed for horses. Some have thought them equal to oats, bushel for bushel; this however, is too high an estimate. Fed with hay occasionally in place of grain, they will be relished, promote digestion, and it is said impart sleekness to the coat of the horse. They are better when cut moderately fine.

Blanketing Horses in the Stable.—M. E. H., Kings Co., N. Y., writes that this practice is injurious to the general health of the horse. It makes him tender and liable to take cold when exposed. It is usually done to improve his coat; this however, should not be done at the expense of his general condition. In extreme cold weather blanketing may be beneficial, though he would prefer having the stable sufficiently warm to dispense with it.

Best Apples in N. Y. Market.—J. A. Glaze, Harrison Co., Ind. From your State, Winter apples chiefly should come to this market. The Newtown Pippin commands the highest price. Parties are now paying $5 and $6 per bbl. for shipping to Europe. Spitzenbergs, R. I. Greenings, and Baldwins follow the Newtown Pippins in price. Large quantities of Russets are sold, but usually at lower prices than the above.

Wild Balsam Apple (*Cucurbitaceæ echinocystis*). —F. R. Leonard, Lancaster Co., Pa.—The specimen received. We may plant a few of the seeds, not having grown any of them for many years. We know of no use for them save their medicinal qualities. Their odd appearance and climbing habit constitute their chief interest.

Size of Trees for Transplanting.—E. J. Wells, Wyoming Co., Pa. It is advisable not to buy trees of more than three or four years' growth. Trees ten or twelve feet high may look more promising when first set out, but those of five to six feet will in a few years outstrip the former, and if properly cared for be far superior. The probability of loss by removing larger trees is also much greater.

Guano Water for House Plants.—Mr. Smith, Bristol County, Mass. Guano water is often used to enrich the soil of potted plants. It must not be too strong. Half a pound of guano dissolved in a large pailful of water, is fully strong enough.

Feeding Bees.—A. R. Potter, of R. I., referring to the advantages of movable frame hives, speaks strongly of their convenience for feeding bees without attracting robbers from other swarms, as a single frame of comb can at any time be transferred from a hive having a surplus of honey to one deficient.

Profits of Bee Keeping.—J. W. Shaw, Montgomery Co., Md., inquires for information as to the profits of bee keeping. We can not go into the details now; the subject was fully treated in a former number, (Vol.

XVI, p. 83, April 1857). The article referred to, as well as others in that and the succeeding volume were prepared by a practical bee-keeper who had no ax to grind, and may be studied with profit by all interested in the subject.

Milk Spoiled by Turnips.—G. Elston, Orange Co., N. Y. The unpleasant taste imparted to milk may be lessened by feeding the turnips immediately after milking. The turnip flavor seems to escape from the milk before it is drawn twelve hours afterwards. If turnips are fed in large quantity, we know of no way to prevent the milk being flavored with them.

Keeping Potatoes.—A. Bakewell, Sullivan Co., Pa. Potatoes should be kept in a dry cool place, away from the light, and where there is good ventilation. Warmth and moisture increase their liability to rot, and also to germinate in Spring.

Sulphur for Sheep Ticks. W. Wagman, Saratoga Co., New York. We doubt the efficacy of sulphur fed to sheep to expel ticks. Dipping or washing the animals in a decoction of tobacco, and rubbing their skins with lard and Scotch snuff has proved beneficial.

From Good Old "Berks."—Among many kind remembrances received from subscribers, we must acknowledge a box that recently came from Messrs. Nicholas Schaeffer and John Shadel, of Berks County, Pa., freight paid, and filled with products from their own farms. Included in its contents were great pound Apples ("Fallawaters"), and excellent specimens of the "Krozier" apple; also a fine lot of two varieties of sweet potatoes, those of the Nansemond variety weighing nearly 1¼ lbs. each, and first rate on the table. But aside from the contents of the box—that, like the great clusters of grapes in olden time, indicated the goodness of the land whence they were brought—the kind expressions of regard and appreciation in the accompanying letter, were gratifying indeed, for they were from readers personally unknown, and those, too, who had no "ax to grind." In their letter they say: "....We send you this box as a little return for the good things we have received for ourselves and our families from the Agriculturist. We feel at home with the paper and shall stand by it, and feel interested in its success...."

The "Terra Culture" Man has been holding forth in these parts, lately, and by dint of advertisements appearing as editorials in one or two journals, has induced a few foolish, unread people, to hear him at $2 per head. We hardly think it worth while to again discuss this humbug, which has more lives than ten cats.

Campbell's Agriculture.—This is a new work on Agriculture, partly scientific, and partly practical, by Prof. J. L. Campbell, of Washington College, Lexington, Va. We have read over several chapters here and there through the work, as we have had time during the past month, and, judging from what we have read, it appears to be an excellent book. It gives many of the first principles of chemistry in a concise form—rather too concise—yet in a pleasing and attractive style. We should disagree with the author in some of his teachings in regard to the chemistry of manures, and upon some of the practical recommendations, yet, everything considered, the book is one of the best, if not the best yet published, and we recommend it as worthy a place in the hands of every farmer. The practical teachings are more especially adapted to the crops grown in the latitude of Virginia, but these are in part useful elsewhere, and the principles are of general application. The price of the book is $1, we believe. It will probably soon be advertised by the publishers. We shall take occasion to get a few copies for such of our readers as desire them, and can obtain them most conveniently at our office, or by mail—though with this, as with all other books, we prefer that every one should buy them of the regular dealers when they can do so.

Knickerbocker Magazine.—We have received from the publishers a copy of a large beautiful steel engraving, called "Merry making in the Olden Time." This has been prepared exclusively as a present to the full price subscribers to that old and popular magazine, which under the auspices of our energetic friend, Dr. Noyes, is constantly improving.

Wait patiently for the Seeds.

Large numbers of envelopes for seeds are already received, and some persons urge us to send them on at once. We can not comply with this request. The seeds are being collected from different parts of the country—many from Europe—and it will be utterly impossible to get them all together, and properly arranged and put up, so as to begin the distribution, until about the second week in January. It will require a large force for several weeks to send all. But all will be got off in time to be used in different localities, if the envelopes are received soon.

Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
NEW YORK, Monday Evening, Dec. 19, 1859.

The closing of the State canals, and the partial interruption of lake and river navigation, have been the only circumstances specially affecting the markets the past month. Yet, their influence, this season, has been unusually limited—having occasioned no very serious changes in the course of trade. The receipts and sales of Flour have been less extensive, during the past four weeks, than that noticed in our last Review. Early in the month the demand was good and general—for home use, shipment, and on speculation, and prices improved. But within a week or two the inquiry has materially diminished. Holders have manifested more eagerness to sell, and the tendency of the market has been downward. There is little disposition to purchase freely, as, with the heavy available supply now here, no serious difficulty in having orders executed is anticipated, and a reduction in prices is looked for with some degree of confidence. The principal demand is now for lots wanted by the regular home trade. Shippers and speculators are moving cautiously. The recent accounts from England have been less encouraging. The tendency of these, in this market, has been to depress business. The stock of Flour on hand here is variously estimated at from 800,000 to 1,400,000 bbls. The most general estimates make the supply somewhat over 1,000,000 bbls..... In WHEAT, as in Flour, the movements have been restricted, and the course of the market has been similar. Toward the close, buyers are very reluctant to purchase, especially for shipment or on speculation, unless at lower rates than the principal holders are disposed to accept. Hence the market closes tamely and irregularly, the tendency being decidedly downward. The available supply of Wheat is estimated at from 1,750,000 to 2,500,000 bushels. It is, however, generally believed that the actual stock, in this city and vicinity, is not much, if any, over 2,000,000 bushels. This is considered an ample provision for the Winter and early Spring trade, and sufficient to prevent any important changes in prices upward.....CORN has been offered and purchased more freely. Prices have fluctuated considerably. Recently the tendency has been upward. Sound, desirable lots of Corn are scarce. The market is almost bare of mixed Western.....RYE has been in fair request, and it has advanced.....A good inquiry has been experienced for BARLEY, at essentially unaltered quotations.....OATS have been briskly sought after, at improved prices..... COTTON has attracted more attention, but it has declined. Crop estimates average 4,250,000 bales as the probable yield. Receipts are already a little over 250,000 bales in excess of those of last year.....Hay, Rice, and Tobacco have been in fair demand. Prices of Hay have favored sellers.....Hemp, Hops, and Seeds have been less active....Wool has attracted less attention, yet it has been stiffly held....Provisions and Groceries have been more sought after. Prices of the leading kinds exhibit some changes favorable to sellers.....The transactions in most other kinds of Produce have been moderate.

CURRENT WHOLESALE PRICES.

	Nov. 19.	Dec. 19.
FLOUR—Superf to Extra State	$4 90 @ 5 15	$4 95 @ 5 25
Common Western	4 95 @ 5 00	4 90 @ 5 10
Extra Western	5 05 @ 7 50	5 15 @ 7 00
Fancy to Extra Genesee	5 15 @ 7 00	5 70 @ 7 00
Super. to Extra Southern	5 40 @ 7 25	5 55 @ 7 25
RYE FLOUR—Fine and Super.	3 60 @ 4 35	3 60 @ 4 40
CORN MEAL	4 00 @ 4 50	3 80 @ 4 25
WHEAT—Canada White	1 36 @ 1 42	1 35 @ 1 40
Western White	1 35 @ 1 47½	1 37½ @ 1 50
Southern White	1 37½ @ 1 50	1 40 @ 1 55
All kinds of Red	1 08 @ 1 35	1 14 @ 1 35
CORN—Yellow	1 00 @ 1 02	98 @ 1 00
White	1 00 @ 1 01	96 @ 98
Mixed	None offering.	@ 1 00
OATS—Western	44½ @ 45½	46½ @ 47½
State	44½ @ 45½	46½ @ 47½
Southern	38 @ 42	42 @ 44
RYE	85 @ 86½	88 @ 90
BARLEY	75 @ 88	75 @ 88
White Beans	1 00 @ 1 10	1 00 @ 1 30
HAY, in bales, per 100 lbs	75 @ 1 00	85 @ 1 00
COTTON—Middlings, per lb	11¾ @ 11¾	11¼ @ 11¼
RICE, per 100 lbs	3 50 @ 4 50	3 50 @ 4 37½
HOPS, crop of 1859 per lb	12 @ 18	12 @ 18
PORK—Mess. per bbl	15 00 @15 12½	@15 00
Prime, old, per bbl	10 50 @10 62½	11 37 @11 50
BEEF—Repacked Mess	9 00 @10 00	9 00 @ 9 75
Country Mess	5 00 @ 5 37½	5 12½ @ 5 30
HOGS, Dressed corn, per lb	7 @ 7¾	7 @ 7¾
Lard, in bbls. per lb	10½ @ 11	10¾ @ 11
BUTTER—Western, per lb	11½ @ 18	11½ @ 18
State, per lb	14 @ 21	14 @ 21
CHEESE, per lb	8 @ 11	8 @ 11
EGGS—Fresh, per dozen	19 @ 20	20 @ 21
Limed— " "	16 @ 17	16 @ 17
POULTRY—Fowls, per lb	8 @ 10	8 @ 10
Geese, per lb	8 @ 10	8 @ 10
Ducks, per lb	8 @ 12	10 @ 12
Turkeys, per lb	9 @ 12	10 @ 11
Venison, per lb	10 @ 12	8 @ 11
FEATHERS, Live Geese per lb	45 @ 53	43 @ 52
SEED—Clover, per lb	8 @ 8¾	8 @ 8¾
Timothy, per bushel	2 12½ @ 2 45	2 00 @ 2 62½
SUGAR, Brown, per lb	6 @ 8½	6¾ @ 8¾
MOLASSES, New-Orleans, pr gl	39 @ 45	50 @ 51
COFFEE, Rio, per lb	10¾ @ 13	10¾ @ 12¾
TOBACCO—Kentucky, &c. pr lb	4 @ 12	4¾ @ 12
Seed Leaf, per lb	6 @ 25	6 @ 25
WOOL-Domestic fleece, per lb.	37½ @ 62½	37½ @ 62½
Domestic, pulled, per lb	30 @ 53	30 @ 52
HEMP—Undr'd Amer'n pr ton	120 @145	125 @150
Dressed American, per ton	170 @200	185 @200
TALLOW, per lb	11 @	10½ @ 10¾
OIL CAKE, per ton	28 00 @35 50	28 00 @35 00
APPLES—Dried, Per lb	6 @ 7½	6 @ 7½
Dried Peaches—pr lb. South'n	10 @ 16	10 @ 17
POTATOES—Mercers, p. bbl	1 50 @ 1 75	1 50 @ 2 00
Peach Blows, per bbl	1 00 @ 1 50	1 25 @ 1 75
Sweet, Virginia, per bbl	1 25 @ 1 75	1 50 @ 1 75
Delaware, per bbl	2 00 @ 2 50	2 50 @ 2 75
Cabbages, per 100	2 50 @ 4 50	2 50 @ 3 50
Onions, Red, per bbl	1 75 @ 1 87	1 75 @ 2 00
White and Yellow, per bush	1 75 @ 2 25	1 75 @ 2 50
Squashes, Marrow, p. 100		2 50 @ 3 00
Turnips, Rutabaga, per bbl	88 @	88
APPLES, Winter, per bbl	2 50 @ 5 00	2 25 @ 4 00
Cranberries, per bbl	12 00 @15 00	15 00 @17 00
Hickory Nuts, per bush	1 12 @ 1 50	1 00 @ 1 25

TRANSACTIONS AT THE N. Y. MARKETS.

RECEIPTS.	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats
24 bus. days *this* mon.	523,050	533,347	204,776	43,461	413,577	815,000
27 bus. da. *last* mon.	734,490	1,405,650	160,700	116,500	432,150	527,900

SALES.	Flour.	Wheat.	Corn.	Rye.	Barley.
24 business days *this* mon.	450,470	571,150	386,700	67,400	362,100
27 business days *last* mon.	620,375	968,500	282,000	135,950	407,750

Breadstuffs exported from N. Y., from Jan. 1 to Dec. 13.

	1858.	1859.
Wheat Flour, bbls	1,351,351	836,970
Rye Flour, bbls	4,525	5,508
Corn Meal, bbls	63,354	75,670
Wheat, bush	3,285,801	202,026
Corn, bush	1,639,304	179,929
Rye, bush	12,457	

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been pretty well supplied during the past month, but not so much overstocked as during the Fall. For the four weeks ending Dec. 13, the beeves brought to this city for slaughter numbered 17,453, or an average of 4,363 ℔ week. The general quality has much improved of late, and prices have advanced about 1c. ℔ lb., dressed weight, during the month. At the last general market, Dec. 13th, prices ranged: 10¼c.@11c. for premiums; 10c.@10¼c. for prime beef; 8¼c.@9¼c. for medium; and for poor qualities 5½c.@7¼c.; with a general average of 8¼c. for all sales.

VEAL CALVES.—Receipts for the past four weeks number 2,249, which is quite a falling off from last month. Prices remain about the same, being 6½c.@7½c. ℔ lb., live weight, for the best calves, and 5c.@6c. for common veal.

SHEEP AND LAMBS.—These come in less freely, and command better prices. Receipts for the past four weeks, 52,227, or an average of 13,056 ℔ week. They are still sold by the head, without weighing, at prices equivalent to about 5c.@5½c. ℔ lb., live weight, for very fat sheep; 4c.@4¼c. for medium; and 3c.@3½c. for very common animals. Some very fat wethers, recently brought in for Christmas, sold for $16 each.

HOGS.—Receipts have been large, footing up 60,369 for the past month, or an average of 15,093 ℔ week. Besides these, many dressed hogs are brought in by wagons, railroads and boats. Prices are a shade higher than a month ago, being 5¼c.@6¼c. ℔ lb., live weight, for corn fed hogs, and 5½c.@5¾c. for still fed animals.

The Weather during the past four weeks has generally been fine for a Winter month, with very little snow in this latitude, and a moderate amount of cold weather. Farmers have had ample opportunity to prepare for Winter, and the mild weather has favored those having short fodder crops. OUR DAILY NOTES, condensed, read thus: *November* 19, rain A. M., clear and fine P. M.—20, 21 fine—22 rain A. M., clear P. M.—23 to 30 mostly clear, and fine Autumn weather. *December* 1, 2 clear and mild—3 cool and cloudy, with rain, sleet, and snow at night—4 cold rain—5, 6 heavy fogs and drizzling rain—7 rainy day, ending in snow at night—8 clear and cold, with a little snow upon the ground—9 clear and the coldest day of the season, mercury 16°—10 clear and cold—11,12,13 cool—14 light snow and cold—15 clear and moderate, about two inches of snow upon the ground—16 clear and cool, thermometer 16°—17 mild, but cloudy, and a storm threatening.

The Advertisements Not Endorsed.

To correct an erroneous conclusion drawn from our recent remarks on advertising we have to say: So long as our business columns are open to the public at all, we can not well avoid admitting legitimate advertisements of some manures, implements, books, periodicals, etc., which we do not approve. Our directions to those in charge of that department, are: to exclude deceptive advertisements, that is, those which do not come out and tell just what is offered to the public so plainly that nobody shall be deceived; also to exclude those persons who are reported not to perform what they promise to the public. We wish it distinctly understood, however, that we do not endorse, or take any responsibility for anything in the advertising pages, unless it be specially referred to in the reading columns.

To Advertisers—Advance in Terms.

Attention is directed to the terms of advertising, which will hereafter be a little more per line than formerly. The new terms, however, are in reality not so high as when the previous rates were established, owing to the large increase in our circulation.

But our charges will still be *lower* than those of any other journal we believe, and considerably below the average. Thus: Our new terms are but little more than *half a cent a line for each thousand subscribers*. By the column the charge is less than ½ cent per 1000. The comparative cheapness of these terms will be appreciated when we state as a matter of fact that, generally the charges by the agricultural periodicals range from 2 to 5 cents per line for each 1000 subscribers. In a few instances they are lower, and in some cases higher—in one agricultural monthly the regular charge is over 10 cents per line per 1000.

We make these comparisons, not invidiously, but in reply to a few persons who have, without calculation doubtless, complained that even our former terms were higher than others.

The fact that the *Agriculturist* is issued but once a month, and is in a form, and of a character to be preserved and often referred to, will of course be appreciated.

We desire but a limited number of advertisements, and exclude all patent medicines, and things of a deceptive character.

The average **circulation** of the *Agriculturist* for six months past has been somewhat over **Fifty Thousand Copies** per month. This is believed to be a larger circulation than that of any other Agricultural or Horticultural Journal in the world. Very large accessions of new subscribers are daily received.

Advertisements.

Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

TERMS—(invariably cash before insertion):

FOR THE ENGLISH EDITION ONLY.

Thirty-three cents per line of *space* for each insertion, (or three lines for $1)
One whole column (143 lines) or more—$40 per column.
☞ Business Notices *Sixty* cents per line.

FOR THE GERMAN EDITION ONLY.

Ten cents per line of *space* for each insertion.
One whole column (130 lines), or more, $10 per column.
☞ Business Notices *twenty* cents per line.

FOR BOTH EDITIONS—ENGLISH AND GERMAN.

Forty cents per line; $45 per column.
☞ Business Notices *Sixty-five* cents per line.

☞ On Advertisements to stand three months or more, a discount of 5 per cent will be made from the above terms for each three months of the whole term paid for in advance. Thus: 5 per cent off for 3 months; 10 per cent off for 6 months; 15 per cent off for 9 months; and 20 per cent off for 12 months.

☞ Laborers, or those seeking employment, *one half* of the above terms.

FARMER WANTED.—A man and his wife to take charge of a *Farm in New-Jersey*, near *New-York*—One who understands his business thoroughly, and his references for honesty, industry and economy must be undoubted. Address "*Box 362 New York Post Office*," giving applicant's address.

Memorial of Washington Irving.
KNICKERBOCKER MAGAZINE.

The January Knickerbocker—opening the 55th vol.—contains a splendid steel-plate engraving of WASHINGTON IRVING, an autograph Christmas letter in lithograph; SUNNYSIDE illustrated, with ORIGINAL LETTERS, ANECDOTES, REMINISCENCES, &c., by several distinguished writers; STORIES and PICTURES of the HUDSON; THE BATTLE OF FORT MOULTRIE by Hon. George Bancroft; THE PHYSICAL DECLINE OF AMERICAN WOMEN, a powerful and searching article that should be read by every man and woman in the country; a Christmas Story, &c., &c.

TERMS—25 cents per copy; for sale everywhere, or sent to any address on receipt of the amount. To every $3 subscriber to the KNICKERBOCKER for 1860, inclosing 12 cents extra in stamps for postage, will be given a copy of the new and splendid lineengraving of

MERRY-MAKING IN THE OLDEN TIME.

Six copies of each for five subscriptions ($15 00): ten copies for eight subscriptions, ($25.00).

☞ KNICKERBOCKER and AMERICAN AGRICULTURIST for 1860 only $3.00, with the Engraving only $4.00. All of them GRATIS for a club of five subscribers, $20.00.

AGENTS ARE WANTED in every part of the country, to canvass for the Magazine and Engraving. Terms unusually liberal. JOHN A. GRAY, PUBLISHER,
16 & 18 Jacob st., New-York.

CHINESE GEESE.—We can spare one pair Brown and three pair White *Swan Geese*: Rouen, Aylesbury, and Java Ducks. Apply to C. N. BEMENT,
Poughkeepsie, N. Y.

FEMALE ALDERNEYS, Ayreshires, and DEVONS, thorough bred. For sale by
ALFRED M. TREDWELL, 45 Fulton-st., N. Y.

FANCY FOWLS.—A few pairs of Golden and Silver-spangled Hamburg, Golden and Silver-spangled Bantams, Smooth-legged white and black African do., Crested Hamburg, Black Java and Albinos, Grey and Speckled Dorkings, Dominique fowls. Apply to C. N. BEMENT,
Poughkeepsie, N. Y.

THE
AMERICAN PUMP.
Patented, April 5, 1859.
WITHOUT SUCTION, WITHOUT PACKING.

This is a *Double Acting Force Pump*, with but one bore and one Piston, worked by a tee piece, having as much leverage and less friction in its working than any other pump heretofore invented.

The working parts all stand *under the water*, as does the air chamber, beyond the reach of careless or malicious interference or frost; there is no loss of water and no loss of labor in *any depth*—a constant flow of water is kept up. The different sizes five in all, work in diameters of from 14 to 24 inches, and cost $15, $20, $25, $40 and $60 each, are worked by hand, horse, water, wind or steam; adapted to cisterns, wells, tanks, machinery, engines, mines, rail-roads, docks, forcing water under or above ground to great heights and distances; discharges at various points—throws by hose and pipe, 30 to 40 feet. It has now been in *successful operation* for 2 months, in every dep h from 8 to 100 feet, and for nearly every conceivable purpose, in twenty-four States of the Union, commencing at Maine and extending to the Rio Grande, and in New Brunswick and Cuba.

"The pump needs no priming to obtain water. The arrangement and operation are very simple, and easily understood."—*Life Illustrated, N. Y.*

"This is a new Pump which is offered for public favor. Those, who have used it speak highly of it."—*N. Y. Observer.*

"The piston discharges at both ends into the air-chamber, causing a regular flow of water at the discharge pipe at top. If preferred, every part can be galvanized, except the piston, which keeps itself clean, and is proof against rust."—*N. Y. Evangelist.*

"This is a new invention, being exceedingly simple rendering the labor of working it, on account of the very small amount of friction in its working parts, very trifling in comparison to other Pumps of a similar nature."—*N. Y. Christian Advocate and Journal*

"As a specimen of the ease and efficiency with which this Pump works, we can state, that one man, working regularly, forced water from this Pump, a distance of 540 feet, being 97 feet perpendicular height."—*Scientific American, N. Y.*

"There are no suction valves nor complicated fittings; neither chains, pulleys, nor guide rods. It is easily arranged for any motive power, and lifts water to any desirable height without any waste of force. A woman or boy can work it with ease to raise water 50 feet, and a man can raise it 100 feet."—*The Independent, N. Y.*

"One of these Pumps now in use in this vicinity, enables us to state that full confidence can be placed in the statement contained in the advertisment."—*Presbyterian Banner and Advocate, Pittsburg, Pa.*

"The Pump we personally tested, was conected with a pipe 65 feet high, and it required but a very slight exertion with one hand to deliver a stream of water at this height at the rate of eight or ten gallons per minute. A small boy could have done it with ease,"—*The American Mining Chronicle, N. Y.*

"We got one of them, which we have put into operation on our farm, and like it so far very much. It brings up a *continuous* stream of water, with little or no labor to the person working it."—*The Southern Planter, Richmond, Va.*

"Having had considerable practical experience in the use of machinery of this character, after testing this with our own hands, we have no hesitation in according to it our unqualified favor. In truth, it surpasses everything for the purpose we have before examined."—*L. S. Journal.*

"One of our newest and most useful inventions of the day. It is without packing and without suction, is exceedingly simple in its construction and, at the same time, possesses all the requirements of a good Pump, and can be used either as a well, a cistern, or a ship's Pump."—*New York Express.*

"A boy of ten years of age can work it at 50 feet, and a man at a hundred feet. We have seen one in operation, and consequently speak from personal knowledge. They are adapted to almost every purpose where a Pump is required."—*New York Day Book.*

"Having seen one of your Pumps in operation, we consider it the best we have ever seen for general use; it is simple, and can be operated with less power than any Pump we have ever known of the same capacity."—*Galveston News, Texas.*

"At the late State Fair in this city, 'The American Pump took the Premium, and met the approbation of all who examined it."—*Raleigh (N. C.) Register.*

"We speak from *personal knowledge*, and say, that of all the Pumps we ever saw, we never saw one at all comparable to this."—*St. Louis (Mo.) Ch. Advocate.*

DOBB'S FERRY, *November*, 7, 1859.

J. M. EDNEY, Esq.—Having one of your newly invented No. 1 Pumps erected on my employers' grounds, at Nints, near Dobb's Ferry, in a well of 67 feet, and having given it several trials of near an hour each, I find it to raise from 8 to 10 gallons per minute, with ease, and to my satisfaction. (The Pump has been in constant use for seven months, and is now worked by a windmill.) JOHN IRVING,
For F. COTTENET, of Cottenet & Atherton, N. Y.

NEW YORK, *November* 7, 1859.

J. M. EDNEY, Esq.—Having had one of your No. 3 Pumps in successful operation for several months, on my premises at Greenwich, Conn., which forces the water up a hill to the distance of 540 feet, and to an elevation of 97 feet, I am enabled to state that it has more than met my expectations, and has not only given satisfaction, but evidence of superior capability strength, and durability. ROBERT M. BRUCE.

CORNWALL, N. Y., *June* 17, 1859.

Dear Sir—The Pump for my well, of 46 feet, raises a good stream of water and a constant flow—works easily, and gives me *perfect satisfaction*. The one for my cistern under my piazza, forcing water into my tower, 40 feet, answers the purpose so much better than anything I could find—gives me *good satisfaction*. Respectfully yours,
JAMES MARSH.

NEW HAVEN, CONN., *May* 16, 1859.

Dear Sir—We have had your Pump put in *on trial*—the *water comes*—find within check for $39 for the same. (Depth 39 feet.)
Respectfully, F. S. & J. PARKER, (Paper Mills.)

INSTITUTION FOR THE DEAF AND DUMB,
WASHINGTON HEIGHTS, Nov. 22nd, 1859.

J. M. EDNEY Esq.—Having had occasion, nearly three months ago, for a Pump differing somewhat from those in ordinary use, after inspecting many kinds I met with your circular, and soon decided that your Pump was just the thing we required. I ordered a Number 2 Pump, the cylinder and piston brass, the remainder of galvanized iron. It was well fitted up, works easily and successfully, and has thus far required no readjustment or attention whatever. Indeed, I regard it as the most durable Pump I have seen, and possessing all the merits you claim for it. E. B. PEET.

J. H. Nevin, of Pittsburg, Pa., (well of 67 feet), says March 11—"I am quite well pleased with the Pump; it works very handsomely indeed. Find check within for $40, and send me another Pump *just like mine*."

Messrs Rhodes & Dears, of San Antonio, Texas, Nov. 5th, say—"We think your Pumps will sell well here, and supersede all other highly *prized* Pumps. Please send us six No. 2 Pumps, with 30 feet of pipe and rods each."

D. S. H. Darst, of Gonzales Texas, October 28th, says: "Find drawings within for a Pump for mining purposes (perpendicular, 130 feet). Inclosed find draft for $230, pay for the above Pump, and send the remainder to me in No. 1 Pumps with extra pipe."

A Working Model and Pumps always to be seen on application at the office. Complete drawings, prices, and particulars in detail sen free of postage. Address,
JAMES M. EDNEY,
147 Chambers st., N. Y.

THE PEOPLE'S MILL.
SANDFORD'S PATENT.

A FARM MILL, Portable, Simple, Compact, and made on an entirely new principle, with plates having a reciprocating and oscilating, instead of a *rotary* motion, with all the power applied within one inch of the center of the shaft, and one that has been fully tested and improved by two years' experience, is now offered to the public. Every Mill is tested, and no one is sent out unless it will grind a bushel of hard Corn fine enough for stock feed in *eight minutes*; many kinds of Grain it will grind much faster.

It is the PREMIUM MILL for the People, and obtained the SILVER MEDAL at the late Exhibition at the American Institute in the City of New-York.

THE *People's Mill* can be put into any saw mill.
THE *People's Mill* is the *cheapest* Mill ever offered to the public.
THE *People's Mill* is the *simplest* Mill ever made.
THE *People's Mill* is the *most durable* in use.
THE *People's Mill* has the most grinding surface of any portable mill.
THE *People's Mill* requires less power than any other doing the same amount of work.
THE *People's Mill* requires less speed than any other mill.
THE *People's Mill* is adapted to any kind of power.
THE *People's Mill* is not a rotary mill.
THE *People's Mill* obviates all the objections to the cast-iron *rotary* mill.
THE *People's Mill* will grind all kinds of grain, coarse or fine, for feed.
THE *People's Mill* will grind Plaster, Bones, Salt, all kinds of Grain, Malt, Peas, Beans, Spices, &c., &c.
THE *People's Mill* largest size, requires about two-horse power.
THE *People's Mill* only requires about two hundred and fifty revolutions per minute.
THE *People's Mill* largest size, will grind from one hundred and fifty to two hundred bushels of grain in 24 hours.
THE *People's Mill* may be renewed at the cost of the plates, which will be furnished at fifty cents each.

The plates are made of hard iron, dressed or grooved on both sides, and the reciprocating motion keeps the grinders sharp. There is no *bolt* to it, which, we think, experience has proved of no use on portable mills. The common sieve is sufficient for all ordinary family purposes. Three sizes—

No. 1, a Hand Mill—price $20, No. 2 $30, No. 3 $40.

LIBERAL DISCOUNT MADE TO DEALERS.

A Mill may be seen in constant use at my shop, also at No. 17 Spruce-st., New-York, a few doors below the Tribune Building

I will fill all orders for belting at cost.
Address R. L. HOWARD, Buffalo, N. Y.
I also manufacture the Improved Ketchum Grass and Grain Harvester.

SCHOOL TEACHERS WANTED.—The subscriber wishes to engage the services of a few School Teachers to act as Traveling Agents in introducing his publications. For particulars apply immediately to
HENRY BILL, Publisher, Norwich, Conn.

PROFITABLE Employment may be had by addressing (post-paid) R. SEARS 181 William-st, N. Y.

GRANVILLE (OHIO) FEMALE ACADEMY. $144 pays all expenses for one year for board, washing, lights, fuel, and furnished room. Spring session begins Feb 2d, 1860. Facilities for a thorough education, and for ornamental branches are unsurpassed. Granville, Licking Co., Ohio. W. P. KERR, Principal.

Seeds of Evergreen Trees and Shrubs.

We are now in receipt of several leading varieties of TREE and SHRUB SEEDS in advance of our extensive assortment of over 300 sorts, a Catalogue of which will be published on the first of February.

NORWAY SPRUCE SEED	75 cts per lb
EUROPEAN SILVER FIR	1.00 "
BLACK AUSTRIAN PINE	3.00 "
PITCH PINE	3.00 "
WEYMOUTH PINE	3.00 "
EUROPEAN LARCH	2.00 "
CHINESE ARBOR VITÆ	2.50 "
AMERICAN DO. (clean seed)	6.00 "
HEMLOCK SPRUCE (clean seed)	6.00 "
SEA-SIDE PINE	1.00 "
BALSAM FIR	3.00 "
WHITE AND BLACK BIRCH, each	2 00 "
YELLOW AND WHITE ASH	1.00 "
CEDAR OF LEBANON CONES, each	20 cts.
SCOTCH FIR	1.50 per lb.
HONEY LOCUST FOR HEDGES	75 "
YELLOW TIMBER LOCUST	75 "
BUCKTHORN SEED	1 00 "

ALSO

APPLE SEED, 40 cts. per qt., $8 per bushel.
PEAR SEED (Imported) $2 50 per lb.
PEAR SEED (American) $3.50 per lb.
BLACK MAZZARD CHERRY PITS, 50 cts. p. qt.. $10 p. bushel.
CONNECTICUT SEED LEAF TOBACCO $3.50 per lb.
EARLY SOVEREIGN POTATOES, the earliest and best variety in Cultivation $4.50 per Barrel.
WHITE CLOVER, LUCERNE, ENGLISH RYE GRASS, BLUE GRASS, ORCHARD GRASS, and all and every variety of *Seeds* for the Farm, Plantation, and Garden.
J. M. THORBURN & CO., 15 John-st, N. Y.

LARGE STANDARD PEAR TREES FOR SALE.

At our Nursery we have a quantity of extra large Pear Trees of the most approved kinds, very thrifty, and all of them have been trimmed and transplanted, and therefore have splendid tops and roots. We also have a quantity of Apple, Cherry and Plum Trees, and a variety of other trees, vines, Shrubs, &c., (as above,) for sale by WICKHAM & BLOODGOOD,
Tioga, Tioga Co, Penn.

TO WHOLESALE DEALERS IN GARDEN, FIELD, and GRASS SEEDS.—I have taken the greatest care in raising and selecting a large and pure stock of every variety of Seeds required by the Gardener, Farmer, and Planter, and purchasers may depend on their being fresh and true to name.

Sales will be made in bulk, by the ounce, pound, quart, bushel, or in papers distinctly labelled.

My Seed List contains all the old varieties, and many new kinds, all of the very best quality, and chiefly raised for me.

FRUIT SEEDS—Apple, Pear, Quince, Plum, Apricot, Cherry, Currant, Gooseberry, Raspberry, Strawberry, Peach, &c.

HEDGES—Honey Locust, Yellow Locust, Buckthorn, Osage Orange, Arbor Vitæ, &c.

DUTCH BULBOUS ROOTS—Of all kinds furnished.

FRUIT, ORNAMENTAL TREES and SHRUBS procured to order, (true to kind) from the most reliable sources, and forwarded, carefully packed, to any part of the country.

BOOKS—All works furnished at publisher's prices.

My prices are as low as any others for the same quality of seeds. Send for a price list.

Orders by mail will be attended to with exactness and promptitude. R. L. ALLEN, 191 Water-st, New-York.

IONA ISLAND VINES.

A new edition of Descriptive Catalogue is now ready, and will be sent to applicants sending a three cent stamp. It contains additional information relative to planting, training, and the management of vines, with a full and accurate description of all the valuable varieties with which I am acquainted that are now in market.

My facilities for propagating (including nearly an acre of glass) are extensive, and in consequence my plants generally, and especially the Delaware Vines, are this season of much better quality than I have before been able to offer.

Of LARGE DIANA VINES my stock is limited, but of surpassing excellence. Of Anna, the stock is also small, but plants of best quality; chiefly LARGE LAYERS ready for bearing.

For prices and full particulars see Catalogue.

Of DELAWARE VINES, besides very large Layers, I have a good stock of exceedingly vigorous plants grown in the open air, for such as may prefer them. Of these the wood and roots are very strong, and will be *thoroughly ripened early in the season.*

I would recommend the Herbemont as a most delicious grape, and a great acquisition to all gardens having a sheltered exposure not more than one degree north of latitude of New-York. A small stock of very large layers ready for bearing now for the first time offered.

Concord, a small stock of remarkably large layers for immediate bearing, as well as small vines. A good stock and very large plants of Rebecca. Canby's August, which is synonymous with Cape, Alexander, York Madeira, Hyde's Eliza, Schuylkill Muscadel, Baldwin's Early, etc., a few layers. Of the following a very limited supply:

Allen's Hybrid, (a white grape equal to Chasselas,) Logan, To Kalon, (synonymous with Wyman, etc.,) Cassidy, Louisa, Elsingburg, Clara, Raabe, Lenoir, U. Village, Early Hudson, Garrigue's, Hartford Prolific, Emily.

Foreign Vines, a good stock—plants vigorous.

Downing's Everbearing Mulberry, a small stock of superior plants, 1 and 2 years old.

Newman's Thornless Blackberry, (best garden variety) a few hundred.

Wholesale Catalogue ready. C. W. GRANT,
IONA ISLAND, near Peekskill, Westchester Co., N. Y.

HUNGARIAN GRAPE SLIPS.—JOHN KOLBER'S second importation of Hungarian Grape Slips, consisting of 30,000 hardy shoots, embracing a selection of *twenty-one of the choicest varieties* of table and wine Grapes, suitable for out-door culture in every section of the United States, will be received in March next. We have also ordered for gratuitous distribution, one case of the stones of the "Makbavalo Silva" or Free stone Plum. Descriptive Catalogues will be forwarded by addressing the undersigned.
JOHN KOLBER, 592 Broadway, N. Y.

Delaware Grape Cuttings,

I will send, free of postage, wrapped in oiled silk, one dozen cuttings of the above grape, containing two eyes each, suitable for grafting into wild vines, for $2. In larger quantities, 5 cts. per eye.
CHARLES B. OTT, Nurseryman,
Pleasant Valley, Bucks Co., Pa.

BY MAIL — POST-PAID — GRAFTS, VINES, and PLANTS, packed in moss or oiled silk:

Grafts of the Baker Apple at	$0 50 per dozen.
Concord Grape Cuttings	1 00 "
Concord Grape Vines, suitable for mailing	0 50 cts. each.
Delaware Grape Vines	2 50 "
New-Rochelle or Lawton Blackberry Plants	0 75 per dozen.
Cahoon Pie Plants, crowns	1 00 "
Peabody, Wilson's Albany, McAvoy's Superior and other choice strawberries	0 75 "

Cash or stamps must accompany orders, which will be filled as soon as the season will admit. F. A. ROCKWELL.
Ridgefield, Conn., Jan., 1860.

BRIDGEMAN'S
HORTICULTURAL ESTABLISHMENT,
Nos. 876 & 878 BROADWAY,
NEW-YORK.

SEEDS. SEEDS. SEEDS.

The subscriber has now on hand a full supply of GRASS, VEGETABLE, HERB, and FLOWER SEEDS, embracing the old favorites, and including several new varieties of superior excellence. For sale (at the lowest market price), for quality and quantity, or in packages for retail trade.

New Catalogues furnished on application.

Also an assortment of HORTICULTURAL IMPLEMENTS, AGRICULTURAL AND HORTICULTURAL BOOKS.

All orders attended to promptly, and with exactness.
ALFRED BRIDGEMAN.

GARDEN, FIELD, GRASS, FRUIT, and FLOWER SEEDS.—I am now supplied with one of the largest and most complete assortments of Seeds ever offered to the public. My stock has been made up with much care. A large proportion are of home growth, being grown expressly for me, which I can recommend as true to name, and of the best quality. Care has been taken to have them perfectly clean.

Among my assortment may be found all the improved varieties of CORN for Garden and Field culture.
POTATOES, early, and for general crop.
BEANS—Early Bush and Snap short.
Large Lima and Horticultural Pole Beans.
CABBAGE—Both early and late of American growth.
CARROT—Early Horn, Long Orange, Altringham, White Belgian, of American growth.
TURNIPS—Early Dutch, Red Top, Strap Leaf, Long White French, White Globe, Yellow Aberdeen, Purple-top Ruta-baga, all of American growth.
SQUASH—Hubbard and Boston Marrow, &c.
OATS—Choice varieties, both American and imported.
SPRING WHEAT—Canada Clubb, China Tea, Golden Drop or Scotch Fife.
SPRING RYE—SPRING BARLEY.
GRASS SEEDS.—Hungarian, Timothy, Orchard, Kentucky Blue, Ray, Fowl Meadow.
CLOVERS—Large Red, Medium Red, White Dutch, Lucerne, Trefoil.
SPRING VETCHES OR TARES, &c.
Catalogues furnished on application.
B. L. ALLEN, 191 Water-st., New-York.

FARM PRODUCE
Sold on Commission,

Such as Flour, Butter, Cheese, Lard, Provisions of all kinds, Grain, Eggs, Poultry, Game, &c. &c.
HAIGHT & EMENS, 226 Front-st., New-York.
Refers to the Editor American Agriculturist.
" R. H. Haydock, Cashier Market Bank, New-York.

R. F. NICHOLS, New-Orleans,
Importer of fine Cattle, and Wholesale Agent for several Fruit and Flower Nurseries.
Consignments and orders solicited.

Keep your Feet Dry.

We call particular attention to the following report of a Special Committee appointed by the American Institute to examine the merits of A. Brower's Patent Waterproof Composition for Leather, for which they awarded a silver medal. Every man, woman and child ought to use it, as it not only makes boots and shoes water-proof, but they will last half as long again for it. For sale by all principal Boot and Shoe, Hardware, Druggists and Notion Houses.
A. BROWER & CO., 4 Reade-st., New-York.
Agents in the country wanted.

REPORT OF A SPECIAL COMMITTEE

Appointed by the Premium Committee of the Thirty-first Annual Fair of the American Institute, held at Palace Garden on Abraham Brower's Patent Water-proof Composition for Leather of all descriptions:

Respectfully report, That we have examined with some care the merits of Abraham Brower's Water-proof Composition and find they have neither been overestimated or overstated by the patentee. This Water-proof Composition is surprising in its effects on all kind of leather, particularly on that which has become hard and dry from exposure, such as Harness, Hose, etc., restoring the leather of which they are composed to life and elasticity.

The same restorative effects are produced on boots and shoes that are hard and unyielding, thereby rendering them disagreeable if not unfit to wear.

The composition is invaluable on new stout boots that are intended for wet weather, as it renders them impervious to water, while at the same time it preserves the pleasant feel of the leather, and on trial it will be found, if properly applied, that no inconvenience or soiling of the stocking will result, as is too frequently the case with the usual application of tallow and oil. And it is further said that this preparation does not prevent the usual polish of the blacking.

If the cheap yet neat and compact form in which this composition is offered to the public shall induce every householder to apply it to their boots and shoes occasionally during the fall and winter months, they will have abundant reason to thank the patentee for serving them.

L. HALLOCK,
J. S. SCHULTS,
F. C. TREADWELL, } Committee.

A Silver Medal awarded.
I certify the above is a true copy from the report.
JOHN CHAMBERS,
Secretary Premium Committee.

WILLCOX & GIBBS FAMILY

$30
SEWING MACHINE

Simple, Noiseless, and Warranted to fill all the requirements of a

Perfect Family Machine.

Manufactured and Sold, Wholesale and Retail, by

JAMES WILLCOX,
No. 508 BROADWAY, opposite St. Nicholas Hotel,
NEW-YORK.

Sanford's Heaters,
PORTABLE OR SET IN BRICK,

Are pronounced by the most competent judges to be *the best*, giving the largest amount of heat, with a small quantity of fuel—owing to their being so constructed as to burn the gases and smoke, and with the largest radiating surface so arranged as to warm the air rapidly to a soft summer heat.

Eight sizes adapted to warming only one or two rooms, or a whole house, churches, academies, public halls, &c.

THEY ALWAYS PLEASE.

Send for testimonials (free) to
SANFORD, TRUSLOW & CO., Manufacturers,
239 Water-street, New-York.

THERMOMETERS, BAROMETERS, &c., of reliable quality and various descriptions, among which are those particularly suited for Horticultural purposes, which register the coldest and warmest degrees of temperature during the 24 hours, in the absence of the observer. For sale by D. EGGERT & SON, 239 Pearl st.

RIGHTS FOR SCHOOLEY'S PRESERVATORY in New-York and Pennsylvania, for sale by
J. L. ALBERGER, Buffalo, N. Y.
Send for Pamphlet.

GOLD AND SILVER MEDALS WERE awarded to F. A. ROCKWELL at the late Fair of the American Institute for the best NATIVE GRAPE and BLACKBERRY WINES. Prices $2.00 per Gallon, $2.00 per Dozen.
F. A. ROCKWELL.
Ridgefield, Conn., Jan., 1860.

Glass Honey Boxes.

By the Dozen or Hundred, sent by R. R. Circulars containing *particulars sent free* on application.
ALSO a *Practical* work on Bee Culture that *all* can understand, sent *free* for one Dollar. Address
M. QUINBY, St Johnsville, Montgomery Co., N. Y.

RUSSIA OR BASS MATS, SELECTED expressly for budding and tying, GUNNY BAGS, TWINES, HAY ROPES, &c., suitable for Nursery purposes, for sale in lots to suit by D. W. MANWARING, Importer,
242 Front Street, New York.

A COMPLETE GRIST MILL
FOR
TWENTY DOLLARS.
THE
TOM THUMB GRIST MILL

This mill has been well tested, and its qualities are fully established. It is now offered to the public as the latest improved, cheapest, and best cast iron mill in use. Its construction is entirely simple, requiring no skill in mechanism, or in the art of grinding to operate it.

It is furnished with an ingenious device for regulating the feed, which is placed within the throat of the mill. This invention supplies the place of the cumbersome and vexatious *rattle-staff and shoe*, performing conveniently all the offices of both.

The axis of the mill is horizontal, and it is arranged to be run with a belt from a horse power, or any ordinary motor.

It may be run with a two-horse power, up to a speed of two hundred and fifty revolutions per minute, or it may be operated with proportionally increased results, for every increment of power and speed, up to four or more horse power, and four or six hundred revolutions per minute.

☞ The mill is warranted to perform as stated.

The following letter is from a responsible gentleman, who is using one of the mills:

"MENDOTA, Illinois, February 14th, 1859.

MESSRS. HEDGES, FREE & CO.,

Gents: The little Tom Thumb Grist Mill you sent me, is the best thing of the kind in use. We have ground corn, oats, barley, Hungarian grass-seed and buckwheat. It works equally well with each. We ground six bushels per hour, and are confident that we can put eight bushels of dry corn through, and then make as good meal as can be made with burrs.

WARREN CLARK,
Sec. of the Eagle Co.

Weight, packed for shipment by rail or express..... 140 lbs.
Price placed free on cars or steamboat..... $20
HEDGES, FREE & CO.,
No. 6 Main-street, Cincinnati, Ohio.

N. B.—A Descriptive Circular will be furnished gratis on application.

EXCELSIOR BURR STONE
Farm and Plantation Mill.
AGENCY NO. 45 GOLD-ST., N. Y.

The experience of the past year has tested the value of the above invention, and proved that it is *the* Mill of the age, and best entitled to public confidence; that it is bound to supersede those now in use, on account of its intrinsic worth.

For hulling Buckwheat it is superior to all other inventions; and for grinding middlings, no other mill can compare with it.

One half the power required to run the ordinary Burr Stone Mill, will drive this, and at the same time do as much and as good work!

Descriptive circulars sent by
J. A. BENNET, Sole Agent.

HORSE POWER.—TAPLIN'S IMPROVED CIRCULAR, one to six Horses. I am now making with wood or iron rim, as preferred; are the lightest running, simplest, least liable to get out of repair, and most satisfactory Circular Horse Power in use. Also, ALLEN'S ENDLESS CHAIN, one or two horse power strongly and well made, and works with the greatest ease to the team. Also, Bogardus' Hall's, Pitt's, Wheeler's, Emery's, and other powers.

Threshers, and Threshers and Cleaners of the most approved pattern.
R. L. ALLEN, 191 Water-st.

Ingersoll's Patent Hay Press.

Now is the time to buy these truly valuable machines. More than 500 of them have been sold in the last two years. Price $50 and $75, delivered in New-York. Warranted to give satisfaction. For circulars, containing full information, address
FARMERS' MANUFACTURING CO.,
Green Point P. O., (Brooklyn,) N. Y.

HAY AND STRAW CUTTERS, STALK CUTTERS AND CRUSHERS.—The Improved Cylinder, price $ 6—also Daniels, Cummings, the Universal, the Yankee self-sharpener, the Hi-le Roller, and every other approved Hay, Straw and Stalk Cutter.

WILLARD'S PATENT ROOT CUTTER.—This is a substitute for the English Pulping Machine. Also other approved Root Cutters.

SAUSAGE CUTTERS AND FILLERS for family and butcher's use.

CORN SHELLERS.—Every variety of hand and power Corn Sheller, including the new and greatly Improved Eagle Sheller, for both hand and horse power.
R. L. ALLEN, 191 Water-st., New-York.

ALBANY TILE WORKS, Corner Clinton-avenue and Knox-st., Albany, N. Y.—The subscribers, being the most extensive manufacturers of
DRAINING TILE
in the United States, have on hand, in large or small quantities, for Land Draining, Round, Sole and Horse Shoe Tile, warranted superior to any made in this country, hard-burned, and over one foot in length.
Orders solicited.
Price list sent on application
C. & W. McCAMMON,
Albany, N. Y.

ICE TOOLS.

Ice Plows, Saws, Tongs, Grooving Bars, Chisels, and Hooks, of the most approved patterns, constantly on hand and for sale at the New-York Agricultural Warehouse and Seed Store, 191 Water-st., N. Y.
R. L. ALLEN.

NEW-YORK STATE AGRICULTURAL SOCIETY, 1859, awarded Premium to M. VANDERHOOF, 171 West-st., New-York, for best
GRAIN, FANCY FLOUR and SALT SACKS,
Bags of every kind, made and beautifully printed.
Paper bags, 1 to 14 lb. from $1.20 to $3.50 per 1000.
Gunny Bags, Hay Rope, Manilla and Jute Rope and Bed Cords, at the lowest prices.
A new style of Bags, shape of seamless, $16 per 100, will hold 2 bushels, or 100 lbs. Flour. Buyers are invited to call.

FARM FOR SALE, situated in Morris County, New-Jersey, about four miles from Drakesville Station, on the Morris and Essex Railroad (one of the healthiest locations in the county,) containing about 120 acres; a goodly portion under a high state of cultivation. The buildings consist of a large frame house, barn, and all necessary buildings. For further particulars enquire of JOHN W. DOUGLASS,
191 Water-street, New-York City.

Ornamental Trees.—HENRY LITTLE, of Bangor, Maine, continues to supply orders for Evergreen and Deciduous Trees at his usual low prices. He has had the experience of 30 years in the business. Catalogues sent gratis.

Contents for January, 1860.

can at any time be increased, by remitting for each addition the price paid by the original members—provided the subscriptions all date back to the same starting point. The back numbers will of course be sent to added names.

Small Type—Enlarging the Paper.

The Seed Lists and Notes, and sundry business matters, not necessary to be repeated hereafter, have crowded out several good editorial articles and communications, and also compelled the use of more small type than is desirable. The lengthy notes on pages 3 and 4 are valuable, and worthy of preservation, aside from their specific relation to the seed list. The charge for advertisements is also advanced, with the view of lessening the number, and securing more reading space in that direction. We would enlarge the paper, but it is already up to the highest limit consonant with the subscription price. To add a single page, or a cover, so as to make room for more advertisements, as has been suggested, would double the entire postage—a small matter to individual subscribers perhaps, yet amounting in the aggregate to over $3,000 a year.

Notes on Postage.

No Postmaster has any legal right to charge over SIX CENTS a year postage on the *American Agriculturist*. The paper is manufactured expressly with reference to having each number weigh a trifle less than *three ounces*, when weighed dry and without the wrapper, as the law directs; and the law is explicit that periodicals weighing not over three ounces, shall be charged one-cent each, if sent singly, and only *half* this rate when the postage is paid quarterly in advance at the office where the periodical is received. On all papers to Canada and to foreign countries, and on all irregular copies sent out, we invariably prepay the postage here. On copies sent regularly to subscribers in the States and Territories we can not prepay the postage.

Sending Money.

Bills on Banks in New-England, New-York, New-Jersey, Eastern Pennsylvania, or Delaware, are desirable, but those of all specie paying Banks in the United States and Canadas will be received *at par*, for subscriptions. Sums of ten dollars and upward it is usually better to send in the form of a Draft on a New-York Bank, payable to the order of the publisher; this no one else can use even if it be abstracted from the mails. We are always willing to divide the small expense of a draft with the sender, or pay the whole when it does not exceed one per cent, which may be deducted from the amount forwarded.

Gold coins should always be securely fastened in a card, or between two thick pieces of paper, by pasting or stitching, before putting them into a letter. Letters enclosing money should always be well fastened, clear to the corners, to prevent money from slipping out, and also to prevent their being opened.

Always be sure that you have actually put the money in before sending, and that the outside direction is right, and also that your *name, Post Office*, and *State* be given inside. Very many letters come to us with one or more of these items omitted.

Missing Numbers Supplied.

Any copy of the *Agriculturist*, failing to reach a subscriber through carelessness of the mails, will be cheerfully replaced without charge. Copies received and afterwards lost or spoiled, will be supplied at the regular rates.

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We have complete sets of volume (XVIII), bound in neat muslin covers, with gilt lettered backs—also bound sets of Vol. XVII and Vol. XVIII in one cover. We have also bound and unbound copies of volumes XVI and XVII singly, and the two bound together.

PRICES AT THE OFFICE.

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SENT POST-PAID BY MAIL.

(*They can not go unpaid.*)

Vols. XVI, XVII, or XVIII. *unbound* ..... $1.12.
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Of Vol. XV, we have no copies, and unfortunately, no stereotype plates.

Of Vols. XII, XIII and XIV, we have some sets bound and unbound, at the same prices as named above for Vols. XVI, XVII, and XVIII.

BINDING.—Sets of numbers brought to this office will be bound up neatly (in our regular style of binding the *Agriculturist*) for 50 cents a volume. Two volumes will be bound together in one cover for 60 cents.

PREPARED COVERS.—Stamped Muslin Covers, neatly made, with title, &c., gilt upon the back, and ready for the insertion of the sheets by any book-binder, can be furnished for Vols. XII to XVIII inclusive, at 25 cents per cover. *Covers can not go by mail*—they would be spoiled.

Almanac for 1860

JAN. 1860.	Sun.	Mon.	Tues.	Wed.	Thurs.	Friday	Sat.
	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
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SEPT.	Sun.	Mon.	Tues.	Wed.	Thurs.	Friday	Sat.
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DEC.	Sun.	Mon.	Tues.	Wed.	Thurs.	Friday	Sat.
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